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VOLKSWAGEN'S QUEST TO INCREASE SHAREHOLDER VALUE: THE CARVE-OUT OF TRATON

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Abstract

The following case study focuses on Volkswagen's attempt to increase shareholder value by separately listing its truck subsidiary Traton at the stock exchange in 2019. The management assumed that Volkswagen suffered from a conglomerate discount. However, a valuation discount could have also been attributable to the company's questionable ESG track record. In addition to evaluating what might be the real cause of the suspected discount, this case study examines which type of separation would fit the company's goal to increase shareholder value best. The case study is accompanied by a teaching note which outlines how it can be taught.

Keywords: Equity Carve-Out, Initial Public Offering, Corporate Governance, ESG, Industry Disruption, Shareholder Value, Conglomerate Discount

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Intro

It was a rainy Monday morning in June 2019 when Frank Witter, Volkswagen's Chief Financial Officer (CFO), got ready to make a big public announcement. The German company was to declare its intent to list its Munich-based truck subsidiary Traton separately at the stock exchange. It would constitute one of Europe's biggest initial public offerings (IPO) of the year and represent a complete novelty: The world's largest automotive company would trim its empire and at least partially separate from one of its largest subsidiaries.

"With today's announcement, Volkswagen and its subsidiary TRATON open a new chapter. We are committed to continue to create value for our shareholders. TRATON is a prime example of how we want to create that value – by focusing on the core of our business and what is best for our stakeholders. It was the right decision to strengthen the independence of our commercial vehicles business. We are delivering step by step on our promise to prepare the Volkswagen Group for the future.[I]*"*

Volkswagen (VW) was determined to have Traton listed by the end of the month. The management hoped to increase the company's valuation through the separate listing as it believed that part of Traton's full value was buried under the VW automotive conglomerate. But was the hidden value large enough to justify a separation, or would a loss of synergies outweigh the benefit? Did VW even suffer from a substantial conglomerate discount or did its stock performance mainly suffer from its questionable ESG (Environmental, Social, and Governance) performance? Could a carve-out of Traton free the truck subsidiary of a potential ESG discount that investors potentially incorporated into VW's valuation?

Volkswagen - Background

Company Overview

With almost 665,000 employees at the end of 2018, VW was one of the world's largest corporate employers. It sold 10.8 million (m) vehicles during the fiscal year of 2018, making it the world's largest automotive company, and it generated over 217 billion (bn) EUR in revenue[II]. VW's portfolio consisted of twelve well-known brands under which the company sold almost every type of vehicle, including passenger cars, sports and luxury cars, motorcycles, and trucks. The structure of the VW Group is illustrated in **Exhibit 1**. The company's financials are summarized in **Exhibit 2-6**.

Volkswagen's Origins

The automotive pioneer was founded by the Nazi regime in 1937 after engineer Ferdinand Porsche pitched a small and affordable car to the Reich Ministry of Transport in 1934. His pitch was called a "memorandum on the construction of a *German People's Car* (deutscher Volkswagen)"[III]. The Nazi regime wanted to make the car manufacturer part of its industrial policy for job creation and built a massive production plant in a town which is nowadays called Wolfsburg. However, as the plant was mainly used to produce military equipment during the Second World War, VW's initial 'People's Car' was only produced in large quantities after the war had ended. The car was ultimately named VW Beetle and became an international success, with more than 15m units built until 1972[IV].

The company became the car manufacturer with most units sold in Europe in 1985 after introducing popular cars such as the Polo, Golf, and Passat. As competition in the automotive industry became more intense, the company tried to sustain itself by further expanding and undertook multiple acquisitions. The multi-brand strategy enabled VW to provide cars to a diverse set of customers, which helped the company establish itself as the world-leading automotive company[V]. A timeline of important acquisitions is depicted in **Exhibit 7**.

The Porsche-Piëch Family's Influence on Volkswagen

Ferdinand Porsche's son founded the sports car manufacturer Porsche AG. His descendants, the Porsche-Piëch clan, handed over operational responsibility to external managers, which is why family member Ferdinand Piëch started working for VW instead of Porsche. He became CEO of VW in 1993 and changed positions to become chairman of VW's supervisory board in 2002[VI]. Diverging family interests led to an unusual situation in which Porsche AG tried to acquire VW through a separate holding company called Porsche Automobil Holding SE between 2005 and 2009. The acquisition attempt failed as Porsche was too highly leveraged. The situation culminated in VW, under the leadership of Ferdinand Piëch, acquiring the sports car manufacturer instead and integrating it into its extensive brand portfolio[VII].

Despite the failed takeover attempt, the Porsche-Piëch family ended up holding the majority of voting rights in VW AG by holding all voting rights in Porsche Automobil Holding SE[VIII]. The family's influence on VW is depicted in **Exhibit 8**. VW's complex shareholder structure is illustrated in **Exhibit 9 and 10**. The company had a dual-class shareholder structure with about 295m ordinary and 206m preferred shares. While only ordinary shares carried voting rights, owners of preferred shares were entitled to a slightly higher dividend[IX].

Expansion into the Truck Business

The company which Ferdinand Piëch's grandfather, Ferdinand Porsche, once created was now under family control. But Piëch was determined to extend the VW empire further. His acquisition targets, however, had nothing to do with VW's initial core product, cars for the common people. Having already owned a stake in the Swedish truck manufacturer Scania, VW took majority control of it in 2008. In 2014, VW owned 63% of Scania and acquired the truck manufacturer's remaining shares for 6.7bn EUR[X]. The automotive giant then gained a majority stake in German truck manufacturer MAN in 2011. Ferdinand Piëch had the goal of building a truck empire by combining the two brands and continued to increase VW's stake in MAN. With MAN's acquisition, VW also welcomed back its South American truck business, Volkswagen Caminhões e Ônibus, which it had previously sold to the German truck manufacturer[XI].

Following an internal power struggle, Piëch ultimately lost support in VW's supervisory board and resigned from all his positions at VW AG in April 2014. In 2017, he cut all remaining ties with the company by selling his stake in the Porsche Holding SE to other family members[XII].

ESG Concerns about Volkswagen

Environmental Track Record: The Dieselgate

In 2015, it was revealed that VW committed one of the largest automotive scandals in history. The United States (US) Environmental Protection Agency uncovered that VW had used software to make it appear as if their cars complied with emission regulations when, in fact, they exhausted 10 to 40 times the legal level of nitrogen oxide. After the agency came forward, VW's stock lost more than a third of its value in only a couple of days[XIII]. Consequently, the automotive giant faced numerous court and governmental proceedings all over the world. The scandal's resolution was still ongoing in 2019 and cost VW more than 28bn EUR in fines and other costs related to the incident until the end of 2018[XIV].

After the harsh backlash from the Dieselgate, VW decided to accelerate its electric car efforts. By 2025, every fourth car in its product portfolio was supposed to be electric[XV]. In 2019, however, the company was far away from becoming a pioneer in alternative drives. Of the 10.1m cars which VW sold in the previous fiscal year, only about 50,000 had been electric[XVI]. Industry-wide, around 2.1m of the total 68.7m passenger cars sold globally in 2018 had been electric. With 1.1m electric car sales, China was the most important market so far, whereas Europe was lagging with only 385,000[XVII].

To combat climate change, the European Commission decided on much stricter emission regulations from 2021 onwards. Manufacturers will not be allowed to exceed an average emission of 95g/km from their cars sold in Europe. Otherwise, financial penalties will be enforced. The European Union's (EU) CO_2 regulations will be the toughest worldwide and were expected to increase electric car sales substantially[XVIII]. VW's average CO_2 emissions per new car registration in Europe had remained around 121g/km since 2015[XIX]. The company's electric car strategy (illustrated in **Exhibit 11**) would need to succeed for VW to avoid paying hefty fines once again.

Social Standing: Volkswagen's Image Problem

Not only did VW pollute the environment, but it also cheated its customers by selling defective products. Overall, more than 11m Volkswagen (brand), Audi and Porsche cars, built between 2009 and 2016, were affected[XX]. While VW had to offer buybacks and compensation in the US, it could modify affected cars in Germany through inexpensive software updates[XXI]. However, more than 300,000 German VW car owners were not satisfied with the company's reparation approach. They were part of lawsuits against the vehicle manufacturer, which were still ongoing in 2019[XXII]. Furthermore, the extra pollution generated by VW's rigged cars could contribute to more than 1,200 premature deaths in Europe alone, as scientists at the Massachusetts Institute of Technology estimated[XXIII]. VW's former reputation as a high-quality car maker was tarnished. In 2016, American market research company Nielsen conducted a brand image survey among 100 global brands in which VW received the worst ranking[XXIV].

In 2013, the German newspaper Wirtschaftswoche accused VW of supporting the increasing discrimination of the government of Chinese province Xinjiang against the region's Muslim minority of Uighurs. VW had opened a factory in Xinjiang and apparently gave in to the Chinese regime and mostly refrained from recruiting Uighurs as employees[XXV]. In April 2019, shortly before the Traton IPO, the company's questionable operations in China came back into public focus when a BBC reporter confronted VW Chief Executive Officer (CEO) Herbert Diess with the verified existence of re-education camps in the region where hundreds of thousands of Uighurs were forcefully held. Diess merely stated that he "was not aware" of the existence of such camps. Members of the German parliament reacted shocked about his apparent ignorance as international media extensively reported the issue[XXVI].

VW's handling of business in countries with dictatorial regimes was not only in particular public focus due to the company's exploitation of slave workers during the Second World War

but also because the state of Qatar, which was known for its horrible human rights abuses, was one of VW's most influential shareholders[XXVII]. During the fiscal year of 2018, VW sold almost 40% of its vehicles in China and was dependent on the market as only few other multinational corporations[XXVIII]. The company could not risk threatening its successful operations in the country and relied on continued collaboration with the Chinese regime. For large Western companies, which operate in key industries, to be allowed to operate in China, they typically had to form joint ventures with Chinese companies[XXIX]. VW received 3.3bn EUR in dividends from its Chinese joint ventures with Chinese state-controlled car manufacturers FAW and SAIC in 2018[XXX].

Corporate Governance and Culture at Volkswagen

VW's repressive corporate culture was regarded as one of the main drivers of the emission scandal. Employees reported a "culture of fear" in the company under Ferdinand Piëch and former CEO Martin Winterkorn. Constant performance pressure led to fear of missing goals and admitting mistakes. Employees reported that they felt forced to pursue illegal actions in their operations to meet the ambitious targets and to avoid repercussions[XXXI]. Furthermore, although there was a whistle-blower system in place within VW, other employees looked away and did not report the misconduct[XXXII]. Another enabling factor for the incident was the company's highly centralized decision-making process and top-down organizational structure. The headquarters in Wolfsburg dictated performance goals to the Group without listening much to managers in the lower hierarchy ranks[XXXIII].

Following the incident, VW was forced to overhaul its compliance system. In resolving the emission scandal in the US, VW agreed to be monitored by former US Deputy Attorney General Larry Thompson. He began his job as VW's monitor in 2017 and was supposed to keep an eye on VW's efforts to achieve a better corporate culture and establish an effective compliance system. At least until 2020, he would monitor VW and would need to certify that VW's control system had fundamentally improved before leaving the company. Among other measures, internal training was supposed to promote law-compliant and moral actions to employees[XXXIV].

Conflicts of interest can be seen as a further enabling factor and arose from VW's board composition. VW had a two-tier board in place, which consisted of a management board and a supervisory board. The supervisory board consisted of ten shareholder representatives and ten

employee representatives[1]. As of 2019, five of the shareholder representatives had been appointed by the Porsche-Piëch family, two by the state of Lower Saxony, and two by Qatar Holding LLC. VW's board was accused of lacking independence. "We are critical of the composition of the supervisory board. (...) VW interprets independence very generously", said Michael Schmidt, CEO of German fund manager Deka in 2018[XXXV]. Hans Hirt, director at the UK activist investor Hermes Equity Ownership Services, regarded VW as one of "the most complicated and questionably governed companies[XXXVI]".

The board's composition did not even fundamentally change after the emission scandal was uncovered. Hans Dieter Pötsch was appointed as the new chairperson of the company's supervisory board, which was heavily criticized by analysts as he was already part of the supervisory board when the scandal occurred[XXXVII]. Furthermore, Pötsch was also chairman of Porsche Automobil Holding SE, meaning that the family's tough grip on the company continued. VW's boards are illustrated in **Exhibit 12-13**. The German Corporate Governance Code's definition of an independent supervisory board member is stated in **Exhibit 14**.

A further thorn in investors' side was the so-called "VW law", which cemented the state's influence on VW. The German law was set in place when the German government privatized the carmaker. To prevent a hostile takeover, the law dictated regulations for Volkswagen that deviated from the regular German Stock Corporation Act. As of 2019, key shareholder meeting decisions, which generally required a three-quarters majority, required more than 80% approval. Hence, the State of Lower Saxony was basically granted a veto right. Furthermore, the law stipulated that decisions regarding production plants needed the supervisory board's approval with a two-thirds majority, meaning that the management could not move production to low-wage countries against the will of the employee representatives[XXXVIII].

Potential Impact of Public ESG Concerns on Volkswagen's Stock Price

Since 2015, Volkswagen's ESG ratings had been continuously declining. A definition of ESG factors is given in **Exhibit 15**. VW's historical performance in the three ESG categories, according to ESG research company Sustainalytics, is outlined in **Exhibit 16-18**. Already in May 2015, before the reveal of the emission scandal, market research company and index provider, MSCI, dropped VW from its ACWI ESG Index, the ESG friendly version of its

[1] In German companies with more than 2000 employees, half of the supervisory board seats must be filled with representatives from the works councils and unions. However, the chairperson of the supervisory board possesses the power to overrule employee representatives as his / her vote is counted twice in case of a tie.

flagship global equity index "All Country World Index", due to the company's questionable corporate governance. After the reveal of the emission scandal, MSCI Research downgraded VW's ESG rating from BBB to CCC, its worst possible rating, which the company still held in 2019[XXXIX]. MSCI's overall ESG rating of VW, compared with other European car manufacturers, is depicted in **Exhibit 19**.

It seems reasonable that VW's ESG performance was not viewed particularly positively by investors, but did it lead to a discount on its stock price? The company's negative ESG performance at least directly exposed its future cash flow to multiple risks. The emission scandal had a devastating impact on VW's stock performance, and insufficient change in the company's corporate governance and culture could enable further incidents. Furthermore, state influence and strong unions could make future cost-saving initiatives hard to implement. Also, Volkswagen's bad image could increasingly deter customers, especially if further scandals would arise. Most importantly, the company was lagging behind in alternative drives. If its electric vehicle strategy would fail, it could lose its status as the world's largest carmaker.

When Giese et al. (2019) researched companies from the MSCI World index according to their MSCI ESG rating, they found that high ESG ratings coincided with, on average, higher company valuations, while low ESG ratings coincided with lower valuations. They also found evidence of significantly higher profitability of the top ESG-rated quintile compared to the lowest ESG-rated quintile. Furthermore, the worst ESG quintile had a significantly higher number of companies during the research period that suffered from incidents leading to a more than 95% cumulative loss over the next three years than the best ESG quintile[XL]. Hoepner et al. (2017) observed statistically significant lower downside risk measures such as volatility and worst-case loss in companies with a high ESG rating[XLI].

When we look at stock performance, the MSCI ACWI ESG Leaders Index, which includes the highest ESG rated companies from each sector, outperformed its parent index by thirteen percentage points from October 2015 (since Bloomberg tracks the index) to June 2019, as detailed in **Exhibit 20**. Furthermore, a survey from consulting firm McKinsey, conducted among senior executives and investment professionals, indicated that in case of an acquisition, they would be willing to pay about 10% median premium for a company with a good ESG record over one with a negative[XLII]. Lastly, institutional investors increasingly favor ESG-compliant corporations as those criteria have become more important for society. In an OECD

survey conducted in 2019, 80% of participating pension funds and 58% of insurance companies responded that they incorporate ESG factors into their investment decisions[XLIII].

Global Truck Industry

Industry Overview

The global truck industry consists of companies that develop, manufacture and service light-, medium- and heavy-duty vehicles. The light-duty segment starts with trucks that weigh 3.5 tons or more, while heavy-duty trucks weigh at least 15 tons[XLIV]. Most truck manufacturers also offer other commercial vehicles that require similar components like trucks, such as buses, special-purpose vehicles (e.g. dump trucks, firefighting trucks), military vehicles, and construction vehicles. In addition, truck manufacturers often sell engines and power trains for marine, military, and industrial applications. Trucks differ vastly from passenger cars, as buying decisions from commercial clients are less of an emotional nature than an economic decision. Hence, the key measure from a customer's point of view is total cost of ownership. Total cost of ownership consists of the acquisition, financing, operation, and disposal of the truck. Operating costs include driver and fuel costs, which accounted for approximately 45% and 30%, respectively, making it by far the largest cost component. As acquisition cost is only one of several cost components, truck manufacturers usually offer further services, including maintenance and repair, fleet management services, and financial services[XLV].

Industry Outlook

In 2019, the truck industry was in the middle of a massive disruption with key trends including electrification & alternative fuels, digitalization, and autonomous driving. Demand for electrification, alternative fuels and fuel efficiency was driven by regulatory requirements and total cost of ownership. Regulatory emission requirements were mainly focused on nitrogen oxide (NOx) and carbon dioxide (CO_2). According to McKinsey estimates, electric trucks will have significantly and hydrogen trucks slightly lower ownership costs than diesel trucks in 2030[XLVI]. Regulation-wise, the EU had some of the world's strictest standards in place, with only the US and Japan demanding even lower nitrogen oxide emission levels.

Furthermore, from 2025 onwards, truck manufacturers in the EU will have to reduce their fleet-wide average CO_2 emissions by 15% compared to the average during a reference period in 2019. By 2030, the CO_2 emission reduction will need to exceed 30%. Harsh financial penalties will be enforced on manufacturers in case of non-compliance. As the EU's 2030 CO_2 emission

targets were thought to be impossible to achieve with traditional diesel engines, massive investment into alternative drives will be required from truck manufacturers[XLVII]. Due to driver costs being the second-largest component of the total cost of truck ownership, autonomous driving is likely to have a tremendous impact on the industry. McKinsey expected first use cases of fully autonomous trucks driving on selected roads and highways as soon as 2025. Digitalization would mainly focus on the connectivity of trucks to increase supply chain efficiency through data collection, sharing, and analysis. Connected trucks also gave truck manufacturers further opportunities for aftersales services to increase revenue[XLVIII].

Competition

Traton's largest competitors in the European market were Daimler (which was a conglomerate with a passenger car and a truck business itself) and AB Volvo. While Traton accounted for 28% of medium and heavy-duty truck sales in Western Europe in 2017, Daimler accounted for 22%, and AB Volvo for 16%[XLIX]. However, Daimler and Volo were ahead of Traton as far as worldwide unit sales were concerned because they also sold trucks in North America and Asia, where Traton was not as active at the time. Daimler, the world's largest truck maker, sold over half a million trucks and buses in 2018, which was more than double Traton's unit sales[L].

Traton – Background

Company Overview

Traton included the commercial vehicle manufacturers Scania, MAN, and VW Caminhões e Ônibus (VWCO). Each Traton brand operated its own distribution network, used vehicle business and aftersales business to ensure an individual customer approach. The financial services businesses of MAN and VWCO were combined under the roof of VW Financial Services, while Scania operated its own. In addition, Traton managed its digital service offer RIO under a separate business unit. **Exhibit 21** shows trucks from Traton's brands, while the brands themselves are described in **Exhibit 22**. The Group structure is illustrated in **Exhibit 23**.

Traton's three truck manufacturers catered to different customer segments: While Scania operated in the premium segment, MAN manufactured trucks for the mass market. VWCO catered to the budget segment in emerging markets and developing countries[LI]. In total, the Group operated 29 production and assembly sites globally and sold 223,000 trucks and buses during the fiscal year of 2018, an increase of 14% compared to the year before. In 2018, Traton

generated nearly 26bn EUR and earned 1.4bn EUR in net income[LII]. The Group's financials are summarized in **Exhibit 24-27**. Detailed financial information about each brand is outlined in **Exhibit 28-29**. Vehicle unit sales information of each brand is provided in **Exhibit 30**.

Traton's Origins

In 2015, while VW was in the middle of the emission scandal crisis, it finally combined its truck manufacturers under one roof and created the VW Truck & Bus Holding as a wholly-owned subsidiary[LIII]. For the new business unit, the company managed to recruit Andreas Renschler from its competitor Daimler. Renschler had previously worked for Daimler for more than 25 years and had spent 9 of those in the company's truck business, which he established as the world market leader[LIV]. Under his leadership, MAN and Scania, as well as VWCO, were working closely together. Similarly, as in VW's passenger car business, where the brands developed many car parts jointly to save costs, the truck business introduced Group-wide procurement and joint development of components such as engines and transmissions[LV].

Renschler was not only focusing on internal efficiency improvements. Through global partnerships, he aimed to benefit from higher power train production volumes as well as joint development and procurement. Renschler signed cooperation agreements with US truck manufacturer Navistar and Chinese Sinotruk (in both of which Traton held shares), as well as Japanese Hino Motors. Renschler had the ambition to make VW's truck business a *"global champion"*[LVI]. In addition to partnerships, he considered acquisitions and an aggressive expansion into the North American and Asian markets to increase market size[LVII]. Traton's global expansion strategy is illustrated in **Exhibit 31**.

In 2018, VW began to prepare for a potential separation and changed its subsidiary's legal form into a European Group[LVIII]. The unit was also given a new name, Traton, to emphasize the emancipation from the parent company[LIX].

Volkswagen Carves Out it's Truck Business

Industry Trend Towards Pure Players

VW was not the first automotive company to part from its truck business. Renault sold its truck business to AB Volvo in 2001, making its stock price surge 5% and Volvo's 8% on the announcement day[LX]. AB Volvo did it the other way round and focused on its truck business and sold its passenger car business to Ford in 1999[LXI]. While not parting from its truck business or separately listing it yet, Daimler's shareholders voted for a complete corporate restructuring

in May 2019, after already planning for it since 2017. Daimler AG would act as a publicly listed holding company while the passenger car business (Mercedes-Benz AG) and the truck business (Daimler Truck AG) would be separate subsidiaries[LXII]. According to Daimler, the move was supposed to give the two enterprises, which aimed at vastly different customer groups, more entrepreneurial independence. Analysts, however, regarded it as preparation for a future spin-off[LXIII].

The Opportunities

"Bringing together our commercial vehicle brands under one roof means we can focus more strongly on the needs of the truck and bus business and can therefore accelerate the decision-making process", Renschler stated after being appointed as head of VW's commercial vehicles unit[LXIV]. He viewed the truck business's newly gained autonomy as necessary to make the company the world's largest truck manufacturer. Renschler planned further acquisitions and partnerships for Traton to reduce the dependence on the European and South American markets (Traton's revenue by region is summarized in **Exhibit 32**). A separate listing of Traton would allow the company to use its stock as an acquisition currency, which meant that shareholders of acquisition targets could receive Traton stock as compensation for tendering their shares[LXV].

The ambitious manager was supported by the new VW CEO Herbert Diess who was appointed in April 2018 to finally resolve the emission scandal for good and push forward the Group's fleet's electrification. Diess and CFO Frank Witter were unwilling to allocate the necessary cash to Traton for Renschler's expensive expansion plans. VW already faced too many challenges in the passenger car business. With governments worldwide urging the automotive industry to shift from fossil fuels to renewable energy, VW started investing heavily in electric cars. Moreover, changing consumer preferences required cars to become digitally integrated. To defend its title as the world's largest automotive company, VW planned to spend 44bn EUR through 2023 on electric and connected cars[LXVI].

Besides the need to allocate cash more efficiently, VW management had to admit that it could never realize the synergies between passenger car and truck business, which it had expected in the past. In fact, trucks and passenger cars required very different parts, engines, and distribution channels. The powertrain of a truck was typically the largest cost component. Hence, joint procurement and development among the Traton brands and partnerships with other truck manufacturers were more promising than tight collaboration with the other VW brands[LXVII].

According to investment bank Evercore, at the beginning of 2019, VW was only valued at around 5.3 times its expected earnings for 2019. The average company valuation in the German stock index Dax was more than twice as high[LXVIII]. Renowned automotive analysts Arndt Ellinghorst suspected that VW suffered from a conglomerate discount and that the true value of Traton could have been buried under VW. Such a discount would imply that VW's twelve brands were valued less if combined than they would be if separate, as investors generally prefer companies with a clearly defined business. Ellinghorst calculated in a "sum-of-the-parts"-analysis that VW's brands could be valued at up to 220bn Euro if listed as separate entities, which would be about triple what VW was valued at mid-2019[LXIX]. In his analysis of VW, which he published in January 2019 for the research company Evercore ISI, he stated: "*We believe VW should consider a holding company model with minority listings of its key brands. This would not only lift material hidden value, it would also improve corporate governance by increasing transparency and accountability across the Group. Plus it would protect industrial collaboration across the various Group brands.*[LXX]" The performance of VW's stock price is illustrated in **Exhibit 33**. Ellinghorst's sum of the parts analysis of VW is given in **Exhibit 34**.

Frank Witter shared Ellinghorst's perception. In March 2019, in a presentation to investors, he stated that an IPO of Traton would help reduce VW's conglomerate discount and overall complexity in the Group[LXXI]. On paper, the idea sounded very promising. Truck manufacturers generally attracted a higher valuation at the stock market than car manufacturers[LXXII]. Before the IPO, investors might have simply valued Traton with the same multiples they valued VW as the truck business was relatively small compared to VW's passenger car business and accounted for less than 11% of the Group's total revenue[LXXIII]. Therefore, a separate listing of Traton could have uncovered additional value by forcing investors to fully value the truck holding. The financial information of comparable companies from the commercial vehicle and passenger car industry is summarized in **Exhibit 35 and 36**. VW's financial information exclusive of its subsidiary Traton is outlined in **Exhibit 37 to 40**.

Furthermore, as Ellinghorst mentioned, Traton's increased autonomy could improve the truck holding's corporate governance. As Traton's entities were not involved in the emission scandal, a separation could therefore free it from a potential ESG discount.

The Risks

For Traton to be freed of a potential ESG discount, investors would need to regard the truck holding as an independent company that would not be subject to directions and questionable

corporate governance from the VW headquarters in Wolfsburg. However, Traton's corporate governance did not look too different from VW's. Hans Dieter Pötsch, chairman of VW's supervisory board, was also appointed as chairman of Traton's supervisory board. Including him, four of the ten shareholder representative seats were filled with appointees from the Porsche-Piëch family. Three other shareholder representatives were part of VW's management board, which increased the risk of a conflict of interests. Traton's board composition is illustrated in **Exhibit 41 and 42**. Moreover, while Traton was not part of the settlement with the US authorities, it still had to comply with the monitor's recommendations[LXXIV].

Furthermore, Andreas Renschler, CEO of Traton, was also on the management board of VW. Unlike the rest of Traton's management board, which was bound by service agreements with the company itself, Renschler would still be bound by a VW service agreement following the IPO. The company merely rendered his services to Traton, meaning that Renschler received this remuneration directly from VW. Renschler's remuneration was similar to the rest of the management board's compensation as it consisted of a flat compensation, a performance-related bonus, and a long-term performance incentive. However, Renschler's bonus was linked to VW's performance and the performance of VW's preferred stock over a three-year period. The rest of the management board's variable remuneration component was linked to the performance of Traton instead[LXXV]. Renschler's remuneration is described in detail in **Exhibit 43**. Like VW, Traton's subsidiaries were heavily unionized. At least, the State of Lower Saxony refrained from appointing a politician as a representative and appointed entrepreneur Wolf-Michael Schmidt instead. Every party involved wanted to prevent valuation loss due to state influence on the company[LXXVI].

Following the IPO, VW would factually dominate Traton according to the German Stock Corporation Act (Sections 311 and sequent) as it would continue to hold the majority of the company's shares. This meant that Traton management would be allowed to take VW's interests into account[LXXVII]. Unlike VW's stock, all Traton stock consisted of ordinary shares, meaning that the shareholder structure as a percentage of subscribed capital would be represented accordingly in the voting rights distribution[LXXVIII].

Despite most parts and components differing vastly between passenger car and truck business, Traton's brands acquired some materials and parts, such as cabin interior, via VW's procurement platform to save money in purchasing through VW's purchasing power. VW and Traton tried to mitigate the risk of losing procurement synergies by signing an agreement that

allowed for continued access to VW's procurement platform following the IPO. All services provided by VW AG would be subject to fees for Traton's brands, but Traton would continue to enjoy similar procurement synergies with VW as before the IPO. Similar agreements existed regarding human resources (e.g. company cars) and information technology (e.g. data centers) services. While the service agreements were expected to continue as long VW held a majority in Traton, the subsidiary could lose out on valuable procurement synergies if the ownership structure would change[LXXIX]. In addition, MAN's and VWCO's financial services business would continue to be part of VW Financial Services[LXXX].

Moreover, the truck and the passenger car industry were both disrupted by demand for alternative drives, digitalization, and autonomous driving. As a separate entity, the truck holding company would be reliant on VW's intent for joint-development and its partnerships with other truck manufacturers to be able to make the necessary investments to stay competitive in a more challenging market and regulatory environment. Prior to the IPO, Scania and MAN participated in VW's research and development by paying an annual fee based on their revenue. Traton expected to continue research and development agreements with VW, which it deemed commercially beneficial for the company as long as VW would control it[LXXXI].

The Type of Separation

Another question concerning Herbert Diess and mainly CFO Frank Witter was how to separate Traton from VW. The three most common options for separating a business unit are a sale, an equity carve-out, and a corporate spin-off. In an equity carve-out, a company sells existing shares or additional shares of the new separate entity as part of an IPO. Depending on the number of shares sold, the company can stay in control of the carved-out entity and receives cash[LXXXII]. The equity carve-out is an alternative to a complete sale of a business unit. It can be used when no adequate acquirer is found, when the management thinks that potential acquirers undervalue the business unit or when the management wants to remain a strategic investor in the business unit and is mainly interested in uncovering hidden value.

In a spin-off, ownership of the subsidiary is transferred to the investors on a pro-rata basis. It can be used if a company does not intend to remain in control of the subsidiary following the separation. Also, investors are not exposed to the risk of bad timing due to a potentially weak market environment, unlike when existing stock is sold in an equity carve-out[LXXXIII]. VW finally opted for an equity carve-out and would hence receive cash that it could use to tackle its challenges in the passenger car business.

The First IPO Attempt

VW's management initially wanted the IPO to take place before easter 2019. However, the management cancelled the IPO due to a weak market environment. In 2019, the trade war between the United States of America and the EU and China continued to escalate, which hurt global supply chains and increased uncertainty for investors. US President Donald Trump threatened the EU with tariffs on European-made vehicles during negotiations. Also, the European Central Bank cut its gross domestic product (GDP) growth target for the Euro area for 2019 from 1.7% to 1.1% in March[LXXXIV]. The weak economic outlook made it hard to achieve a high valuation at the market for an export-oriented company like Traton. The overall deal value of IPOs shrunk by more than 60% globally to 20bn EUR in the first quarter of 2019 compared to the same period in the previous year. While 291 companies ventured onto the trading floors in the first quarter of 2018, only 179 did so in 2019[LXXXV]. The performance of the global IPO market prior to Traton's listing is illustrated in **Exhibit 44**.

When the stock market and global IPO environment changed for the better during the second quarter of 2019, Diess pushed June 2019 through as the final IPO date. Nevertheless, VW was confronted with lower than anticipated demand. The management decided that it would only offer 10% of Traton shares, instead of the 25% it was previously willing to sell, in an attempt to keep the valuation at a level which it viewed as fair[LXXXVI]. In **Exhibit 45**, past and forecasted GDP growth of the Euro area is illustrated.

The Second IPO Attempt

Frank Witter scheduled the IPO of Traton for the 28th of July of 2019. Traton would be dual-listed in Stockholm (as Scania was based in Sweden) and Frankfurt. The base offer consisted of 50m existing shares, which would be sold by VW. As there would be a total of 500m outstanding shares, VW was selling 10% of its stake in Traton. In the case of high demand, an over-allotment of up to 7.5m existing shares was possible through the responsible investment banks' exercise of the greenshoe option[LXXXVII].

Frank Witter wondered how he and his team of financial experts, together with the investment banks (listed in **Exhibit 46**), should value Traton for the IPO. Furthermore, Witter wanted to examine some concerns more closely. Would investors free Traton from potential ESG and conglomerate discounts? Should VW go through with selling existing shares, or would another way of listing Traton, for instance, in a corporate spin-off, be better suited? And finally: Would the separate listing of Traton create value for VW and its investors?

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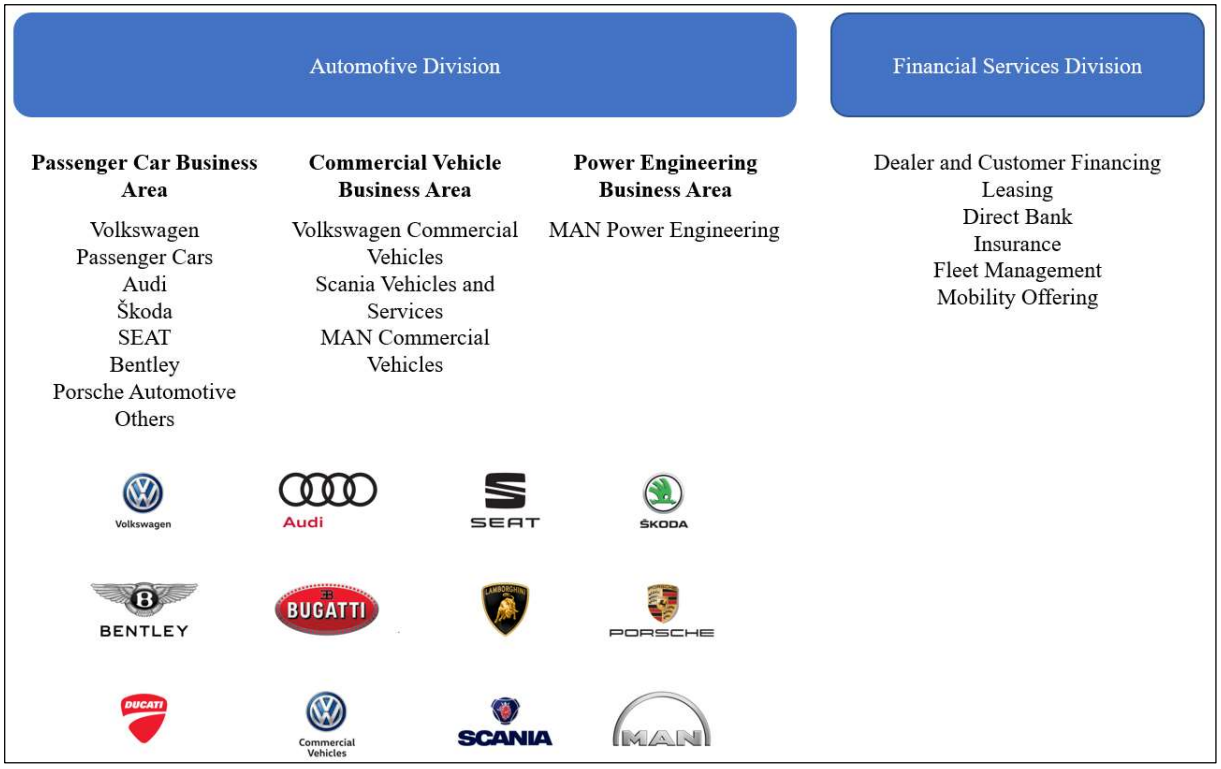
Appendix I: Case Study Exhibits

Exhibit 1: Volkswagen Group Structure as of December 31, 2018



Source: Volkswagen AG

Exhibit 2: Volkswagen Income Statement

In Millions of EUR	Fiscal Year ended December 31, 2016	2017	2018
Revenue	**217,267.00**	**229,550.00**	**235,849.00**
/ Cost of Revenue	(176,270.00)	(186,001.00)	(189,500.00)
Gross Profit	**40,997.00**	**43,549.00**	**46,349.00**
Other Operating Income	9,311.00	10,116.00	10,487.00
/ Operating Expenses	(43,205.00)	(39,847.00)	(42,916.00)
Operating Income (Loss)	**7,103.00**	**13,818.00**	**13,920.00**
Interest Income	642.00	951.00	967.00
Income from Affiliates	3,497.00	3,482.00	3,369.00
/ Interest Expense	(1,330.00)	(2,317.00)	(1,547.00)
/ Other Financial Result	(2,620.00)	(2,261.00)	(1,066.00)
Pretax Income	**7,292.00**	**13,673.00**	**15,643.00**
/ Income Tax Expense (Benefit)	(1,913.00)	(2,210.00)	(3,490.00)
Current Income Tax	(3,274.00)	(3,205.00)	(3,533.00)
Deferred Income Tax	1,361.00	995.00	43.00
Income (Loss) from Continued Operations	**5,379.00**	**11,463.00**	**12,153.00**
Income from Discontinued Operations	0.00	0.00	0.00
Income (Loss) Incl. Minority Interest	**5,379.00**	**11,463.00**	**12,153.00**
/ Minority Interest	(10.00)	(10.00)	(17.00)
Net Income	**5,369.00**	**11,453.00**	**12,136.00**
/ Attributable to Volkswagen AG Hybrid Capital Investors	-225.0	-274.0	-309.0
Net Income Attributable to Volkswagen AG Shareholders	**5,144.00**	**11,179.00**	**11,827.00**

Source: Bloomberg

Exhibit 3: Volkswagen Balance Sheet

In Millions of EUR	As of December 31, 2016	2017	2018	As of March 31, 2019
Assets				
Noncurrent assets	**254,010**	**262,081**	**274,620**	**284,896**
Intangible assets	62,599	63,419	64,613	64,785
Property, plant and equipment	54,033	55,243	57,630	62,239
Lease assets	38,439	39,254	43,545	45,354
Financial services receivables	68,402	73,249	78,692	81,602
Investments, equity-accounted investments and other equity investments, other receivables and financial assets	30,537	30,916	30,140	30,917
Current assets	**155,722**	**160,112**	**183,536**	**186,326**
Inventories	38,978	40,415	45,745	49,477
Financial services receivables	49,673	53,145	54,216	56,250
Other receivables and financial assets	30,286	32,040	37,557	41,321
Marketable securities	17,520	15,939	17,080	17,022
Cash, cash equivalents	19,265	18,457	28,938	22,256
Assets held for sale	–	115	–	–
Total assets	**409,732**	**422,193**	**458,156**	**471,222**
Equity and liabilities				
Equity	**92,910**	**109,077**	**117,342**	**117,507**
Equity attributable to Volkswagen AG shareholders	85,122	97,761	104,522	104,493
Equity attributable to Volkswagen AG hybrid capital investors	7,567	11,088	12,596	12,525
Equity attributable to Volkswagen AG shareholders and hybrid capital investors	92,689	108,849	117,117	117,019
Noncontrolling interests	221	229	225	489
Noncurrent liabilities	**139,306**	**152,726**	**172,846**	**186,229**
Noncurrent Financial liabilities	66,358	81,628	101,126	108,811
Provisions for pensions	33,012	32,730	33,097	37,145
Other liabilities	39,936	38,368	38,623	40,273
Current liabilities	**177,515**	**160,389**	**167,968**	**167,486**
Put options and compensation rights granted to noncontrolling interest shareholders	3,849	3,795	1,853	–
Current Financial liabilities	88,461	81,844	89,757	83,920
Trade payables	22,794	23,046	23,607	24,405
Other liabilities	62,411	51,705	52,750	59,162
Total equity and liabilities	**409,732**	**422,193**	**458,156**	**471,222**

Source: Volkswagen AG

Exhibit 4: Volkswagen's Industrial Business Net Financial Debt

In Millions of EUR	As of December 31, 2018	As of March 31, 2019	Change
Cash, cash equivalents	28,938	22,256	(6,682)
Marketable securities	17,080	17,022	16,820
Gross liquidity	46,018	39,278	(6,740)
Total borrowings	(190,883)	(192,731)	(1,848)
Net liquidity / (net financial debt)	**(144,865)**	**(153,453)**	(8,588)
of which in the Industrial Business segment	**24,862**	**17,076**	(7,786)

Source: Volkswagen AG

Exhibit 5: Volkswagen Cash Flow Statement

In Millions of EUR	Fiscal Year ended December 31, 2016	2017	2018
Cash from Operating Activities			
+ Net Income	5,369	11,453	12,136
+ Depreciation & Amortization	20,793	22,030	22,391
+ Non-Cash Items	(6,498)	(22,222)	(11,844)
+ Change in Non-Cash Working Capital	(10,234)	(12,447)	(15,409)
+ (Increase) / Decrease in Accounts Receivable	(2,155)	(1,660)	(6,400)
+ (Increase) / Decrease in Inventories	(3,637)	(4,198)	(5,372)
+ Increase / (Decrease) in Other	(4,442)	(6,589)	(3,637)
Net Cash From Discontinued Operations	0	0	0
Cash from Operating Activities	**9,430**	**(1,186)**	**7,274**
Cash from Investing Activities			
+ Change in Fixed & Intangible Assets	(18,551)	(17,901)	(18,681)
+ Net Change in Long Term Investment	(3,883)	1,711	(2,204)
+ Net Cash From Acquisitions & Divestitures	1,755	(318)	(706)
+ Other Investing Activities	0	0	(1)
+ Net Cash From Discontinued Operations	0	0	0
Cash from Investing Activities	**(20,679)**	**(16,508)**	**(21,592)**
Cash from Financing Activities			
+ Dividends Paid	(364)	(1,332)	(2,375)
+ Cash From (Repayment) Debt	(9,375)	12,374	19,989
+ Increase in Capital Stock	0	3,473	1,491
+ Decrease in Capital Stock	0	0	0
+ Other Financing Activities	19,451	3,110	5,461
+ Net Cash From Discontinued Operations	0	0	0
Cash from Financing Activities	**9,712**	**17,625**	**24,566**
+ Effect of Foreign Exchange Rates	(91)	(727)	(173)
Net Changes in Cash	**(1,628)**	**(796)**	**10,075**

Source: Bloomberg

Exhibit 6: Market Capitalization of Volkswagen AG

In Millions of EUR	As of December 31, 2016	2017	2018	As of June 3, 2019
Market Capitalization	68,552.09	84,568.51	69,730.17	70,816.09

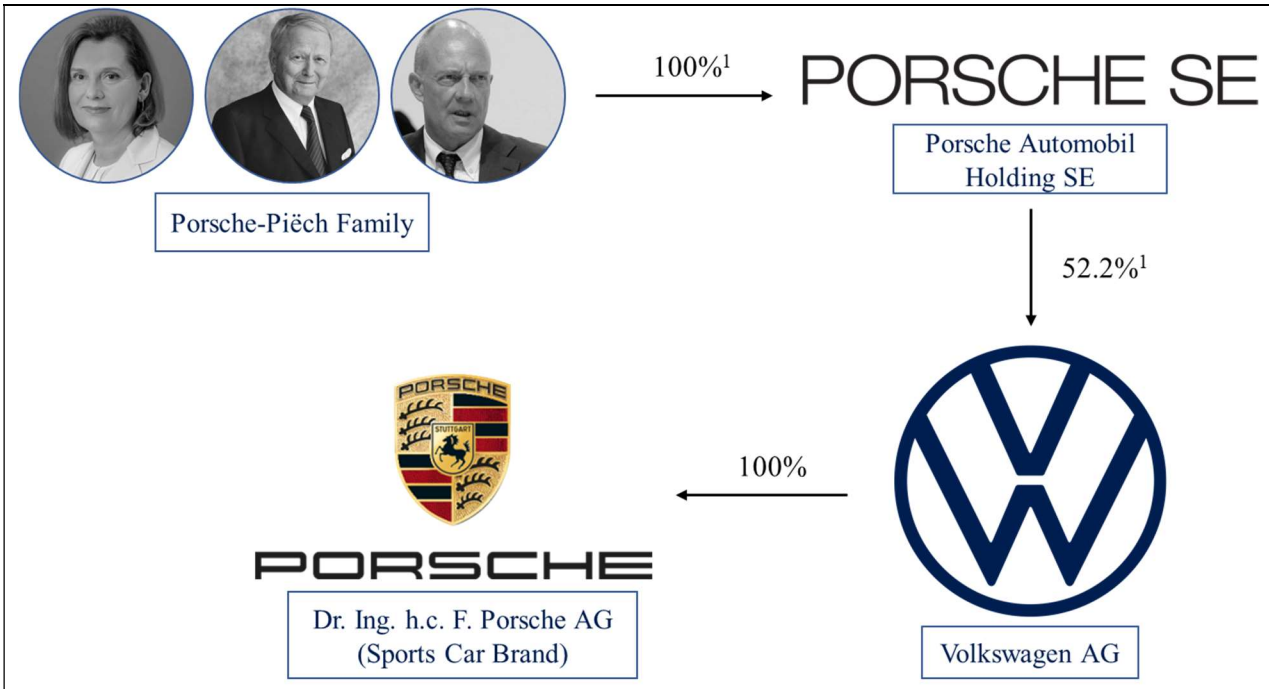
Source: Bloomberg

Exhibit 7: Volkswagen's Acquisition History

Year	Acquired Vehicle Brand	(Sub-)Industry
1965	Auto Union GmbH (Audi)	Passenger Car
1986	SEAT	Passenger Car
1989	Škoda	Passenger Car
1998	Bentley, Lamborghini and Bugatti	Sports and Luxury Car
2008	Scania	Truck and Bus
2009	Porsche	Sports and Luxury Car
2011	MAN	Truck and Bus
2012	Ducati	Motorcycle

Source: Volkswagen AG

Exhibit 8: Depiction of the Porsche-Piëch Clan's Influence on Volkswagen

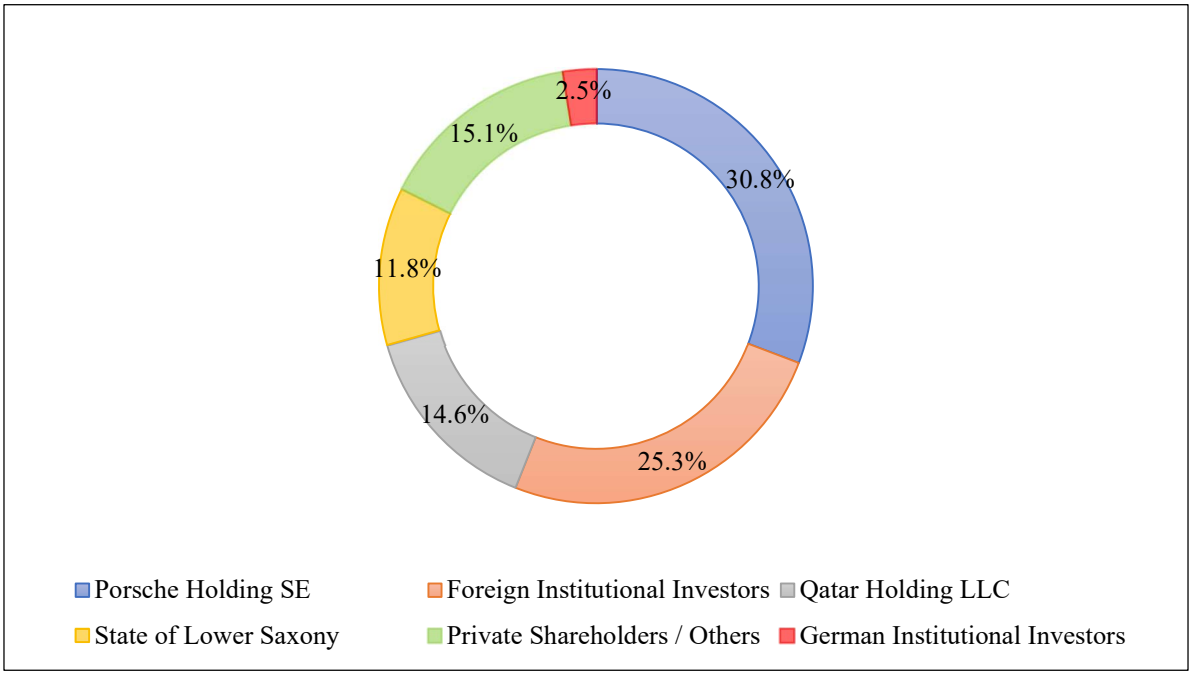


[1]Percentage of voting rights

Pictured representatives from the Porsche-Piëch family are (from the left): Dr. Louise Kiesling (VW AG supervisory board member), Wolfgang Porsche (VW AG and Porsche Automobil Holding SE supervisory board member; chairman of the supervisory board of Dr. Ing. H.c. F. Porsche AG) and Dr. Ferdinand Oliver Porsche (Porsche Automobil Holding SE supervisory board member).

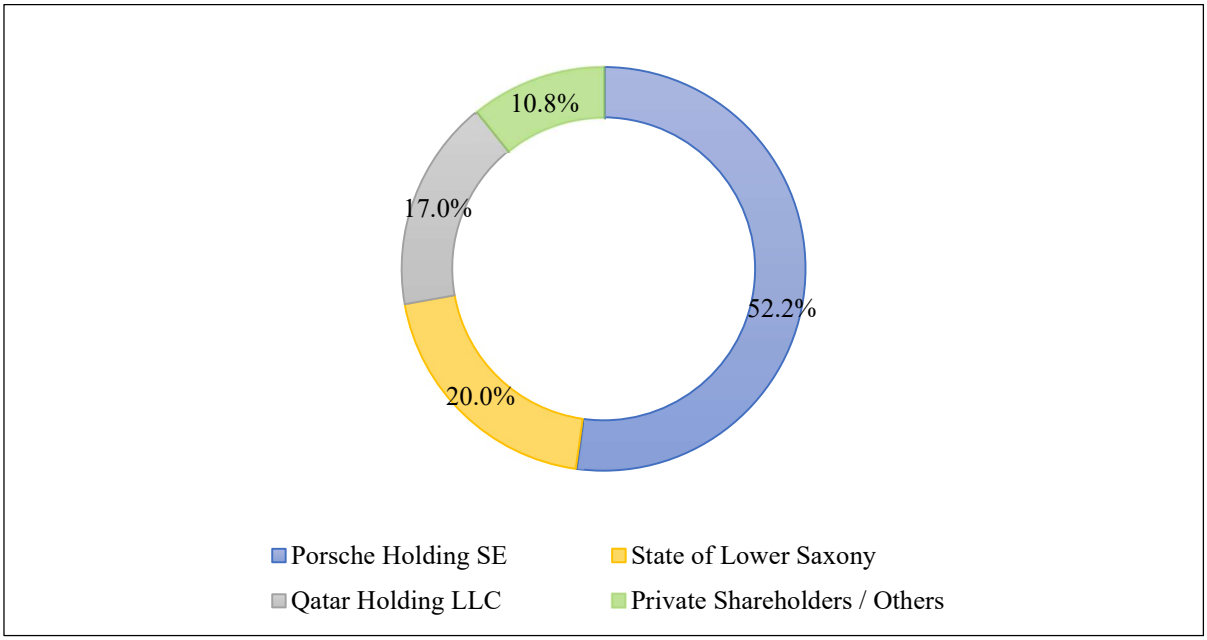
Source: Porsche SE, Volkswagen AG

Exhibit 9: Volkswagen's Shareholder Structure as a Percentage of Subscribed Capital (As of December 31, 2018)



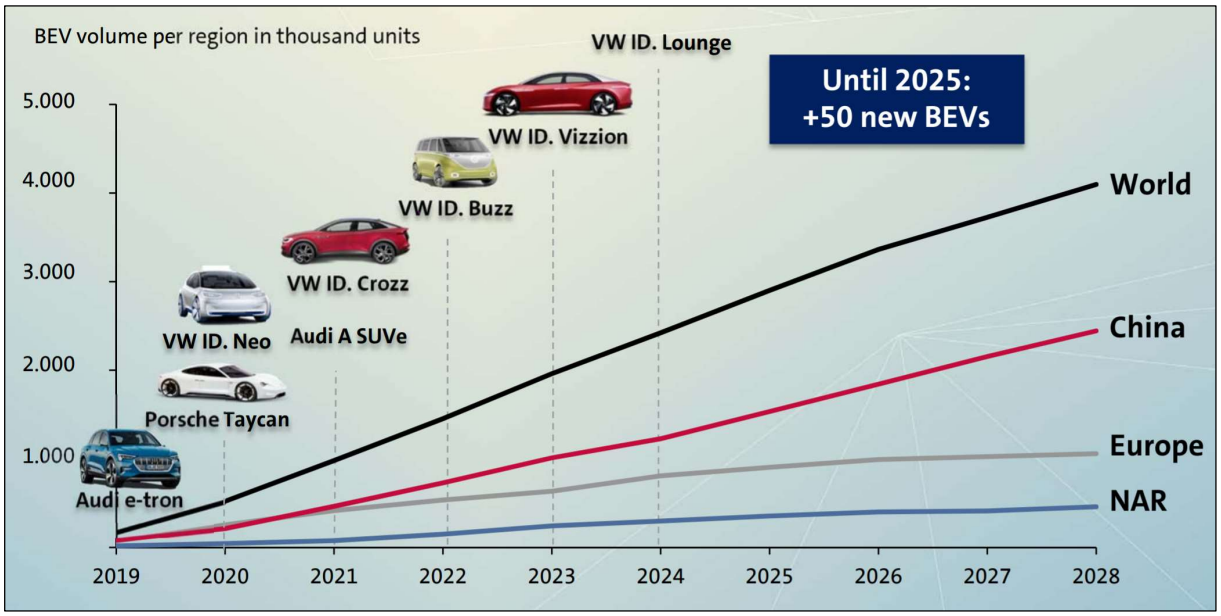
Source: Volkswagen AG

Exhibit 10: Distribution of Voting Rights at Volkswagen AG



Source: Volkswagen AG

Exhibit 11: Volkswagen's Battery Electric Vehicle (BEV) Sales Forecast and Scheduled Launch Dates of Selected BEVs



Source: Volkswagen AG

Exhibit 12: Volkswagen's Supervisory Board Composition as of December 31, 2018

Name; Gender	Background	Representative of
Shareholder Representatives		
Hans Dieter Pötsch; m **Chairman**	Chairperson of Traton's and Porsche Automobil Holding's Supervisory Board	Porsche Automobil Holding SE
Dr. Hussain Ali Al-Abdulla; m	Minister of State, Qatar	Qatar Holding LLC
Dr. Hessa Sultan Al-Jaber; f	Chairwoman of the Supervisory Board of Malomatia Qatar, Doha	Qatar Holding LLC
Dr. Bernd Althusmann; m	Minister of Economic Affairs, Labor, Transport and Digitalization for the Federal State of Lower Saxony	State of Lower Saxony
Marianne Heiß; f	Chief Financial Officer of BBDO Group (German Marketing Agency)	Others
Dr. Louise Kiesling; f	Businesswoman	Porsche Automobil Holding SE
Dr. Jur. Hans Michel Piëch; m	Lawyer in private practice	Porsche Automobil Holding SE
Dr. Jur. Ferdinand Oliver Porsche; m	Member of the Board of Management of Familie Porsche AG Beteiligungsgesellschaft	Porsche Automobil Holding SE
Dr. Rer. Comm. Wolfgang Porsche; m	Chairman of the Supervisory Board of Porsche Automobil Holding SE	Porsche Automobil Holding SE
Stephan Weil; m	Minister-President of the Federal State of Lower Saxony	State of Lower Saxony
Employee Representatives		
Jörg Hofmann; m **Deputy Chairman**	First Chairman of IG Metall (German Union)	Works Council
Birgit Dietze; f	First authorized representative of IG Metall Berlin (German Union)	
Dr. Jur. Hans-Peter Fischer; m	Chairman of the Board of Management of Volkswagen Management Association	
Uwe Hück; m	Chairman of the General and Group Works Councils of Dr. Ing. h.c. F. Porsche AG	
Ulrike Jakob; f	Deputy Chairwoman of the Works Council of Volkswagen AG, Kassel plant	
Johan Järvklo; m	Secretary-General of the European and Global Group Works Council of Volkswagen AG	
Peter Mosch; m	Chairman of the General Works Council of AUDI AG	
Bertina Murkovic; f	Chairwoman of the Works Council of Volkswagen Commercial Vehicles	
Bernd Osterloh; m	Chairman of the General and Group Works Councils of Volkswagen AG	
Athanasios Stimoniaris; m	Chairman of the Group Works Council of MAN SE and of the SE Works Council	
Werner Weresch; m	Chairman of the General and Group Works Councils of Dr. Ing. h.c. F. Porsche AG	

Source: Volkswagen AG

Exhibit 13: Management Board Composition of Volkswagen as of June 14, 2019

Name; Gender	Responsibilities	Background
Dr.-Ing. Herbert Diess; m	Chairperson	Diess obtained a doctorate in the field of assembly automation at Munich Technical University in 1987. He started his career in the automotive supplier industry before joining BMW in 1996. In 2012, he joined BMW's management board. Volkswagen recruited Diess in 2015. Since then, he is part of Volkswagen's management board and was appointed as chairperson in 2018.
Hiltrud Dorothea Werner; f	Integrity and Legal Affair	Werner holds an economics degree and began her career in consulting before switching to BMW in 1996. After completing an international management trainee program, she worked at BMW Bank. In 2000, she switched to BMW's audit team and eventually became head of Group Audit Financial Services. After working for MAN as Chief Audit Executive, she became head of Volkswagen Group's Audit in 2016. In 2017, she joined the management board.
Andreas Renschler; m	Chairperson of the Board of Management of TRATON SE	Renschler completed an apprenticeship as a banker and holds degrees in business engineering and business administration. He began his career at Daimler in 1988 and worked in multiple leadership positions. He spent nine years on the management board of Daimler's truck division. Since 2015 he is a member of Volkswagen's management board and Traton CEO.
Gunnar Kilian	Human Resources	Kilian started his career in journalism and then worked in public relations and spokesperson positions for Volkswagen and the German Parliament. Since 2012, he is the general manager of the Group Works Council and joined the Group's management board.
Oliver Blume; m	Chairman of the Board of Management of Porsche AG, Sport & Luxury brand Group	Blume holds a PhD in mechanical engineering from the Institute of Vehicle Technology at Tongji University, Shanghai, and has been with the Volkswagen Group since 1994. He started at Audi but also worked for the brands Volkswagen and Porsche. Blume is CEO of Porsche AG since 2015.
Dr.-Ing. Stefan Sommer; m	Components & Procurement	Sommer holds a PhD in engineering and worked at automotive suppliers before joining Volkswagen's management board in 2019. His positions included CEO of ZF Friedrichshafen AG, one of Germany's largest automotive suppliers.
Frank Witter; m	Finance & IT	Witter joined the Volkswagen Group in 1992 and was working in treasury positions in multiple entities. In 2002 he became CFO of Volkswagen in the USA and Canada. In 2006 he became CEO of the Group's North American division. Since 2015 he is CFO of Volkswagen AG.
Bram Schot; m	Chairman of the Board of Management of AUDI AG, Premium brand Group	Schot, born in the Netherlands, is the former CEO of Mercedes-Benz's Italian division. He joined Volkswagen in 2011 to oversee strategic procurement projects. His responsibilities at Volkswagen included marketing and sales positions at Volkswagen Commercial Vehicles and Audi. In 2019, he joined the board.

Source: Volkswagen AG

Exhibit 14: German Corporate Governance Code Section 5.4.2 (As amended on February 7th, 2017)

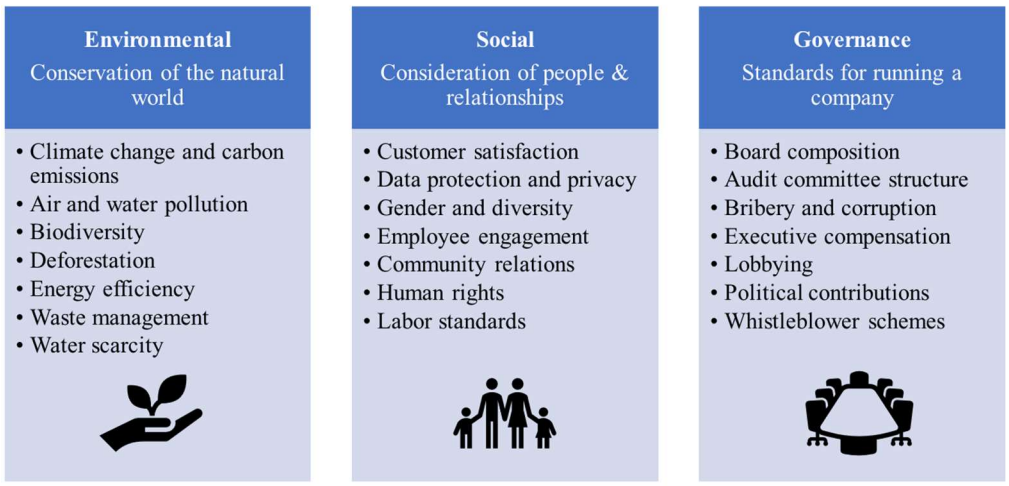
"The Supervisory Board shall include what it considers to be an appropriate number of independent members, thereby taking into account the shareholder structure. Within the meaning of this recommendation, Supervisory Board members are to be considered non-independent in particular if they have a personal or business relationship with the corporation, its governing bodies, a controlling shareholder or a company affiliated with the controlling shareholder that may cause a substantial and not merely temporary conflict of interest. No more than two former members of the Management Board shall be members of the Supervisory Board. Members of the Supervisory Board shall not be members of governing bodies of, or exercise advisory functions at, significant competitors of the company."

Source: German Corporate Governance Code

Exhibit 15: ESG Factors - Definition

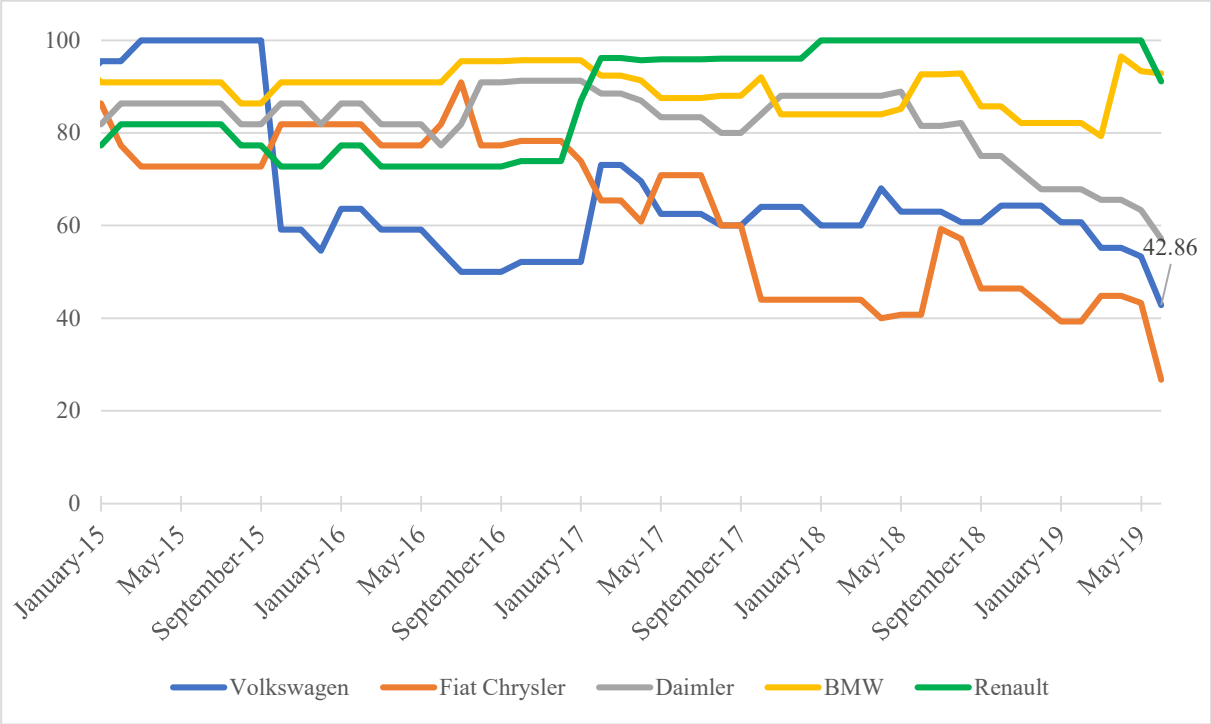
"ESG stands for Environmental, Social, and Governance. Investors are increasingly applying these non-financial factors as part of their analysis process to identify material risks and growth opportunities. ESG metrics are not commonly part of mandatory financial reporting, though companies are increasingly making disclosures in their annual report or in a standalone sustainability report."

The following graphic provides examples of ESG factors:



Source: MSCI

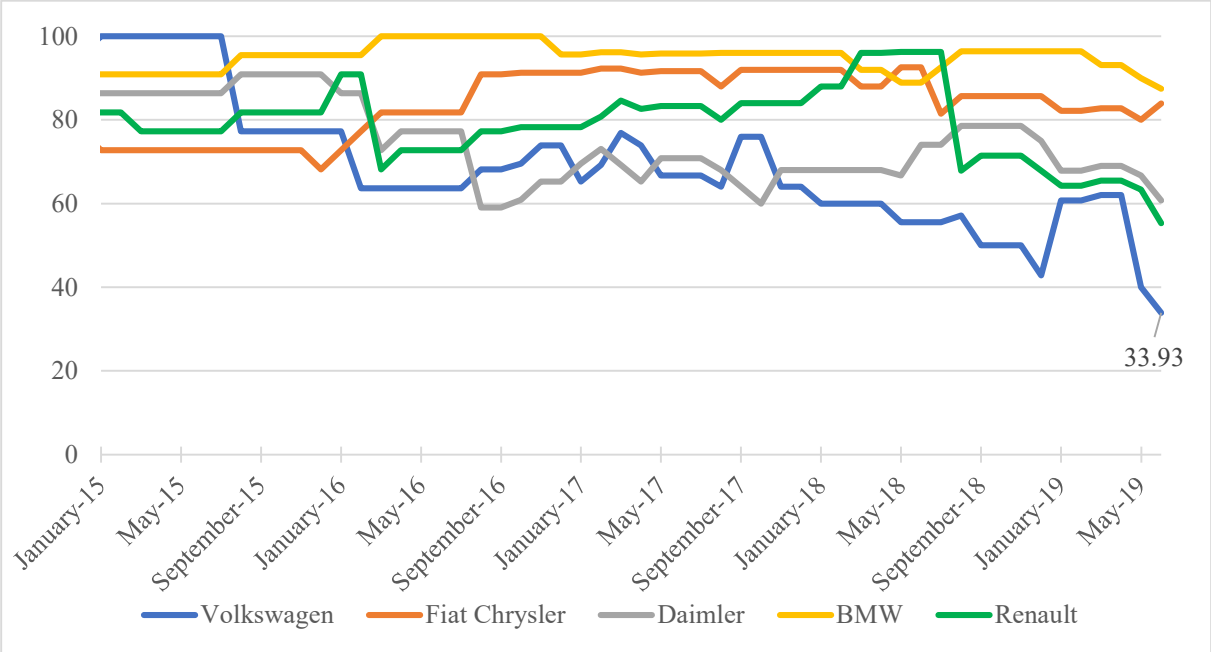
Exhibit 16: Sustainalytics Environmental Peer Percentile Rank of Volkswagen in Comparison with other European Car Companies from January 2015 to June 2019



Sustainalytics, the ESG research subsidiary of Morningstar, assigns an overall percentile ranking based on companies' environmental, social and governance rating and relative to its industry peers. For the top 1%, the assigned percentile is 99%. For the bottom 1%, the assigned percentile is 1%. Aggregated ESG performance is based on the company's standards, disclosure, and controversy across the respective ESG themes.

Source: Bloomberg

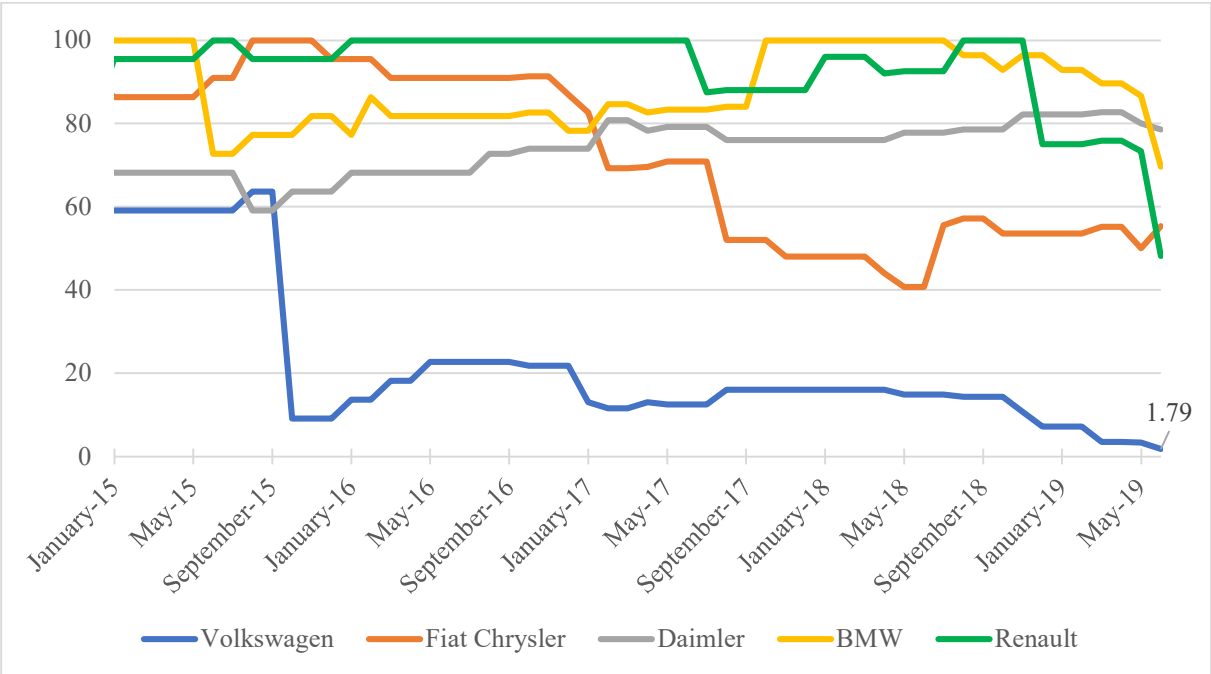
Exhibit 17: Sustainalytics Social Peer Percentile Rank of Volkswagen in Comparison with other European Car Companies from January 2015 to June 2019



Please refer to Exhibit 16 for how to read the diagram.

Source: Bloomberg

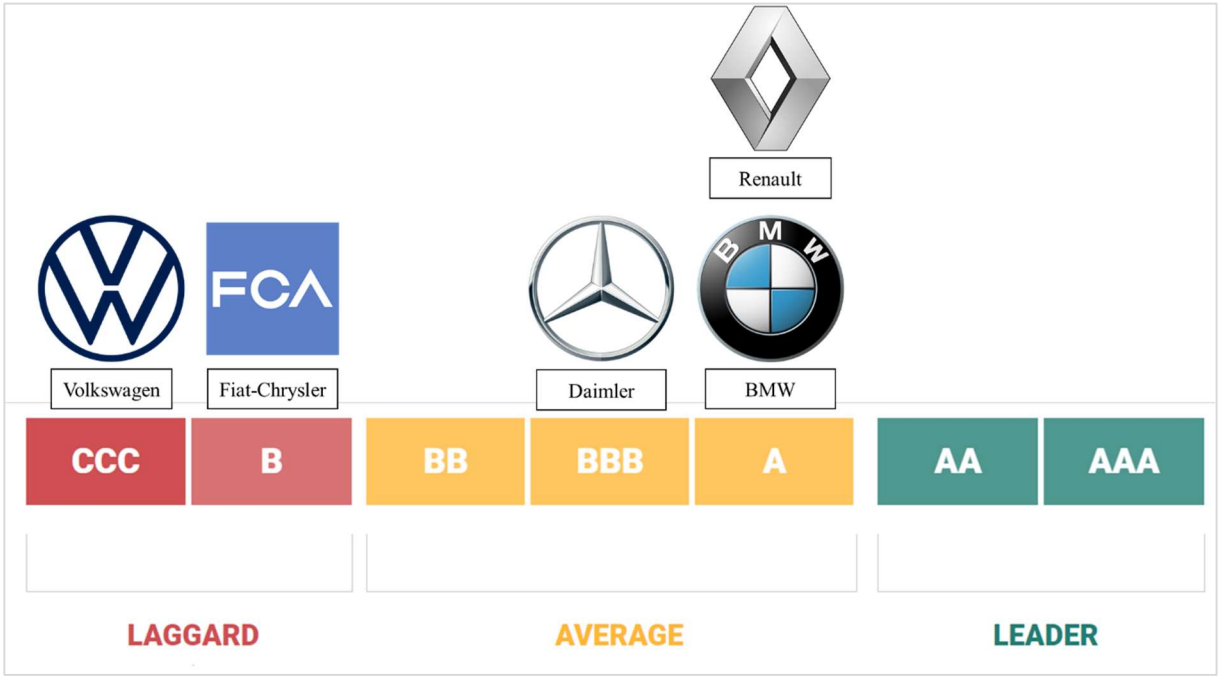
Exhibit 18: Sustainalytics Governance Peer Percentile Rank of Volkswagen in Comparison with other European Car Companies from January 2015 to June 2019



Please refer to Exhibit 16 for how to read the diagram.

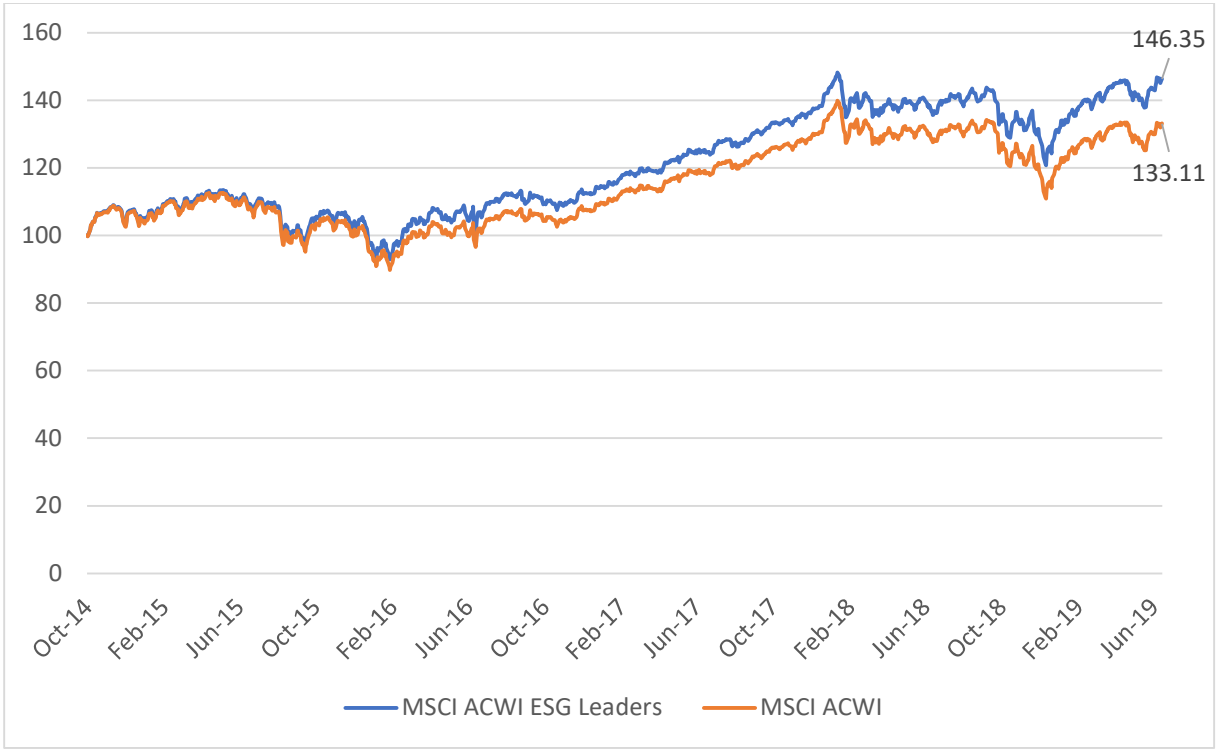
Source: Bloomberg

Exhibit 19: MSCI ESG Rating of Volkswagen in Comparison with other European Car Manufacturers as of June, 2019



Source: MSCI, Logos from the respective companies

Exhibit 20: The Performance of the MSCI ACWI ESG Leaders Index against the MSCI ACWI from October 2014 to June 2019 with an Index Start Value of 100



Source: Bloomberg

Exhibit 21: Trucks from the three manufacturing brands of Traton – Scania (left), Volkswagen Caminhões e Ônibus (center), and MAN

Source: Traton SE

Exhibit 22: Description of Traton's Brands

Scania: The Swedish truck manufacturer's product portfolio mainly consisted of heavy- and medium-duty trucks and buses. In addition, the company sold industrial, marine, and power generation engines. Scania was leading the development of alternate drives in the Group. The company already offered a broad range of alternative fuel-driven vehicles that included ethanol and gas-powered trucks and buses and two hybrid trucks that could run fully loaded on an electric engine for up to 10 kilometers in restricted urban areas. Long-haul hybrid trucks and fully electric trucks were already in development. The company also offered a variety of digital solutions. Approximately 50% of the company's rolling fleet in 2018 was connected and hence provided the company with various vehicle data. In 2018, Scania accounted for 41.4% of units sold in the Traton Group. In the IPO, the advising banks highlighted Scania as the group's crown jewel due to its high profitability and good prospects through its expertise in alternative fuels ahead of stricter emission rules.

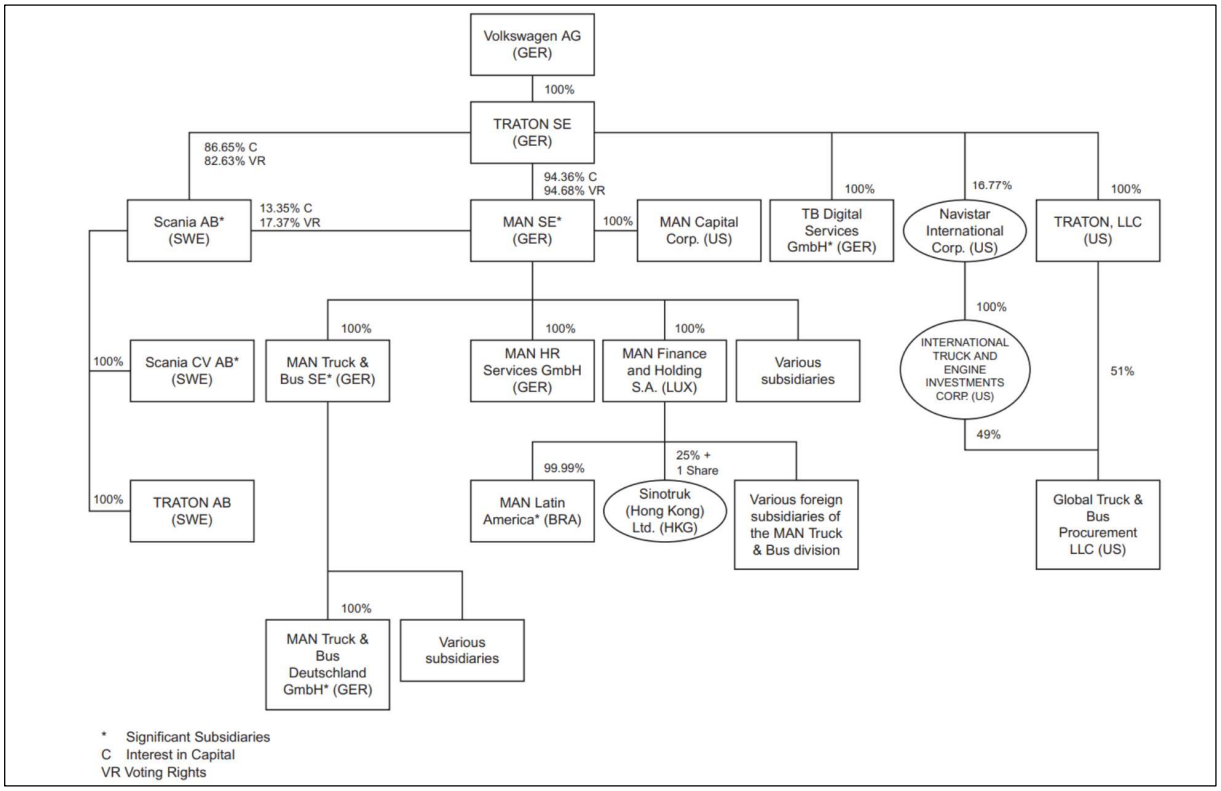
MAN: Munich-based MAN manufactured trucks and buses, and vans, which made the company a full-range supplier of commercial vehicles. With 100,357 vehicles sold in 2018, MAN accounted for 43.1% of the group's total unit sales. Like Scania, the company also manufactured diesel and natural gas engines and components for the Traton Group and other vehicle manufacturers. In terms of profitability, MAN lacked far behind its Swedish sibling, so the advising investment banks tried to pitch MAN as a turn-around story with lots of future potential if synergies could be achieved.

Volkswagen Caminhões e Ônibus: VWCO mainly sold budget trucks under the Volkswagen brand and some MAN trucks. With that strategy, it became one of the largest truck manufacturers in South America. Its product offer consisted of tailor-made trucks for emerging markets, which offered good value for relatively little money. VWCO was continuously expanding into new developing markets such as Nicaragua and Ghana in the past five years.

RIO: In 2017, RIO, a cloud-based connectivity platform, was launched as part of MAN before being established as a separate business unit in 2018. It offered a digital platform and aimed to connect all transportation chain participants through a cloud-based logistics ecosystem that included information and forecasting features. Through data collection and data-driven intelligence, an increase in overall efficiency, profitability, and sustainability was supposed to be achieved. Since 2017, most new MAN trucks in Europe offered access to the platform.

Source: Bloomberg and Traton SE

Exhibit 23: Traton Group Structure



The following table presents an overview of the Group's significant subsidiaries:

Legal name	Seat	Business Area	Direct and/or indirect Interest
1 MAN			
MAN SE	Munich, Germany	Holding	94.36%*
			94.68%**
MAN Truck & Bus SE	Munich, Germany	Trucks and Buses	100%
MAN Truck & Bus Deutschland GmbH	Munich, Germany	Trucks and Buses	100%
2 Scania			
Scania AB	Södertälje, Sweden	Holding	
Scania CV AB	Södertälje, Sweden	Trucks and Buses	100%
3 Volkswagen Caminhões e Ônibus			
MAN Latin America Indústria e Comércio de Veiculos Ltda.	Sao Paolo, Brazil	Trucks and Buses	99.99%***
4 RIO			
TB Digital Services GmbH	Munich, Germany	Digital Services	100%

* Interest in capital

**Voting Rights

***0.01% held by Antonio Roberto Cortes, CEO of MAN Latin America, due to a mandatory legal requirement.

Source: Traton SE

Exhibit 24: Traton Income Statement

In Millions of EUR	Fiscal Year ended December 31, 2016	2017	2018
Revenue	**21,915**	**24,366**	**25,927**
/ Cost of Revenue	(17,649)	(19,653)	(20,946)
Gross Profit	**4,266**	**4,713**	**4,981**
Other Operating Income	506	606	792
/ Operating Expenses	(4,045)	(3,807)	(4,260)
Operating Income (Loss)	**727**	**1,512**	**1,513**
Interest Income	79	91	83
Income from Affiliates	17	74	209
/ Interest Expense	(298)	(264)	(245)
/ Other Financial Result	(32)	(34)	6
Pretax Income	**493**	**1,379**	**1,566**
/ Income Tax Expense (Benefit)	(297)	(489)	(415)
Current Income Tax	(424)	(377)	(449)
Deferred Income Tax	127	(112)	34
Income (Loss) from Continued Operations	**196**	**890**	**1,151**
Income from Discontinued Operations	22	149	250
Income (Loss) Incl. Minority Interest	**218**	**1,039**	**1,401**
/ Minority Interest	(10)	(10)	(11)
Net Income	**208**	**1,029**	**1,390**
/ Other Adjustments	0	0	0
Net Income Attributable to Traton SE Shareholders	**208**	**1,029**	**1,390**

Source: Bloomberg

Exhibit 25: Traton Balance Sheet

In Millions of EUR	As of December 31,			As of March 31,
	2016	2017	2018	2019
Assets				
Noncurrent assets	**24,344**	**25,337**	**25,851**	**27,317**
Intangible assets	7,055	7,019	6,597	6,597
Property, plant and equipment	5,940	6,003	5,469	6,465
Lease assets	5,840	6,103	6,599	6,746
Financial services receivables	3,237	3,805	4,212	4,366
Investments, equity-accounted investments and other equity investments, other receivables and financial assets	2,271	2,407	2,975	3,142
Current assets	**16,916**	**17,428**	**20,533**	**16,025**
Inventories	5,405	5,781	4,822	5,500
Financial services receivables	2,112	2,319	2,688	2,904
Other receivables and financial assets	4,409	4,683	9,769	3,667
Marketable securities	84	51	98	1,100
Cash, cash equivalents	4,907	4,594	2,997	2,854
Assets held for sale	-	-	157	-
Total assets	**41,260**	**42,765**	**46,384**	**43,341**
Equity and liabilities				
Equity	**10,931**	**11,810**	**16,801**	**13,313**
Equity attributable to Traton SE shareholders	10,829	11,702	16,799	13,078
Noncontrolling interests	102	108	2	235
Noncurrent liabilities	**11,087**	**13,238**	**13,217**	**13,605**
Noncurrent Financial liabilities	3,555	5,545	5,449	5,604
Provisions for pensions	1,526	1,541	1,506	1,623
Other liabilities	6,008	6,151	6,259	6,377
Current liabilities	**19,241**	**17,717**	**16,366**	**16,424**
Put options and compensation rights granted to noncontrolling interest shareholders	3,849	3,795	1,827	-
Current Financial liabilities	5,485	3,426	5,366	6,019
Trade payables	3,362	3,507	2,969	2,927
Other liabilities	6,546	6,989	6,083	7,478
Liabilities directly associated with assets classified as held for sale	–	–	123	–
Total equity and liabilities	**41,260**	**42,765**	**46,384**	**43,341**

Source: Traton SE

Exhibit 26: Traton's Industrial Business Net Financial Debt

	As of December 31,	As of March 31,	
In Millions of EUR	2018	2019	Change
Cash, cash equivalents	2,997	2,854	(143)
Marketable securities	202*	1,100	898
Gross liquidity	3,200	3,954	754
Total borrowings	(10,814)	(11,623)	(809)
Net liquidity / (net financial debt)	**(7,615)**	**(7,669)**	(54)
of which in the Industrial Business segment	**227**	**604**	377

*Differs from balance sheet item as loans to affiliated companies are included as well

Source: Traton SE

Exhibit 27: Traton Cash Flow Statement

In Millions of EUR	Fiscal Year ended December 31, 2016	2017	2018
Cash from Operating Activities			
+ Net Income	208	1,029	1,390
+ Depreciation & Amortization	1,866	1,941	1,893
+ Non-Cash Items	180	(349)	(987)
+ Change in Non-Cash Working Capital	(1,614)	(1,849)	(1,848)
+ (Increase) / Decrease in Inventories	(353)	(482)	(632)
+ Increase / (Decrease) in Other	(1,261)	(1,367)	(1,216)
Net Cash From Discontinued Operations	118	(46)	(72)
Cash from Operating Activities	**758**	**726**	**376**
Cash from Investing Activities			
+ Change in Fixed & Intangible Assets	(1,014)	(806)	(866)
+ Net Change in Long Term Investment	(7)	(265)	(17)
+ Net Cash From Acquisitions & Divestitures	(87)	31	351
+ Other Investing Activities	(349)	(147)	(349)
+ Net Cash From Discontinued Operations	(186)	(174)	(184)
Cash from Investing Activities	**(1,643)**	**(1,361)**	**(1,065)**
Cash from Financing Activities			
+ Dividends Paid	0	0	0
+ Cash From (Repayment) Debt	(2)	(2)	0
+ Increase in Capital Stock	0	311	0
+ Decrease in Capital Stock	0	0	0
+ Other Financing Activities	(757)	91	(858)
+ Net Cash From Discontinued Operations	(16)	(8)	(7)
Cash from Financing Activities	**(775)**	**392**	**(865)**
+ Effect of Foreign Exchange Rates	(8)	(71)	(48)
Net Changes in Cash	**(1,668)**	**(314)**	**(1,602)**

Source: Bloomberg

Exhibit 28: Traton's Sales Revenue by Operating Unit within the Industrial Business Segment (before consolidation effects)

	Fiscal Year ended December 31,		
In Millions of EUR	**2016**	**2017**	**2018**
Scania V&S	**10,989**	**12,427**	**12,982**
Vehicles	6,720	7,430	8,326
Aftersales*	2,282	2,462	2,592
Others**	1,987	2,535	2,064
MAN T&B	**9,247**	**10,022**	**10,814**
Vehicles	5,642	5,977	6,688
Aftersales*	1,869	1,965	2,070
Others**	1,736	2,080	2,056
VWCO	**864**	**1,162**	**1,421**
Vehicles	747	1,014	1,290
Aftersales*	91	101	96
Others**	26	47	35
Reconciliation	(815)	(755)	(710)
Total Group Revenue	**21,915**	**24,366**	**25,927**

*Includes genuine parts and workshop services

** Includes used vehicles, engines, powertrains and parts deliveries, leasing business, interest and similar income and other sales revenue (including sales revenue from hedging transactions)

Source: Traton SE

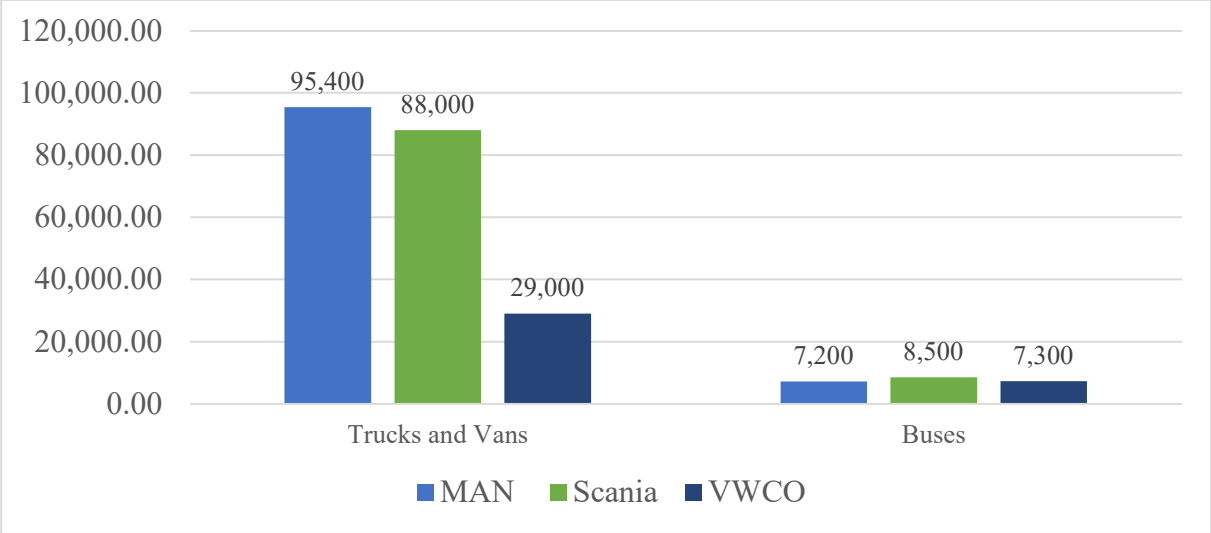
Exhibit 29: Traton's Operating Profit by Segment and Operating Unit

	Fiscal Year ended December 31,		
In Millions of EUR	**2016**	**2017**	**2018**
Industrial Business	**596**	**1,368**	**1,346**
Scania V&S operating profit*	555	1,167	1,207
MAN T&B operating profit*	405	526	402
VWCO operating profit*	(192)	(103)	28
Financial Services	**105**	**111**	**138**
Other Segments	**27**	**33**	**34**
Reconciliation	0	0	(6)
Total Group operating profit	**727**	**1,512**	**1,513**

* Before consolidation within Industrial Business segment

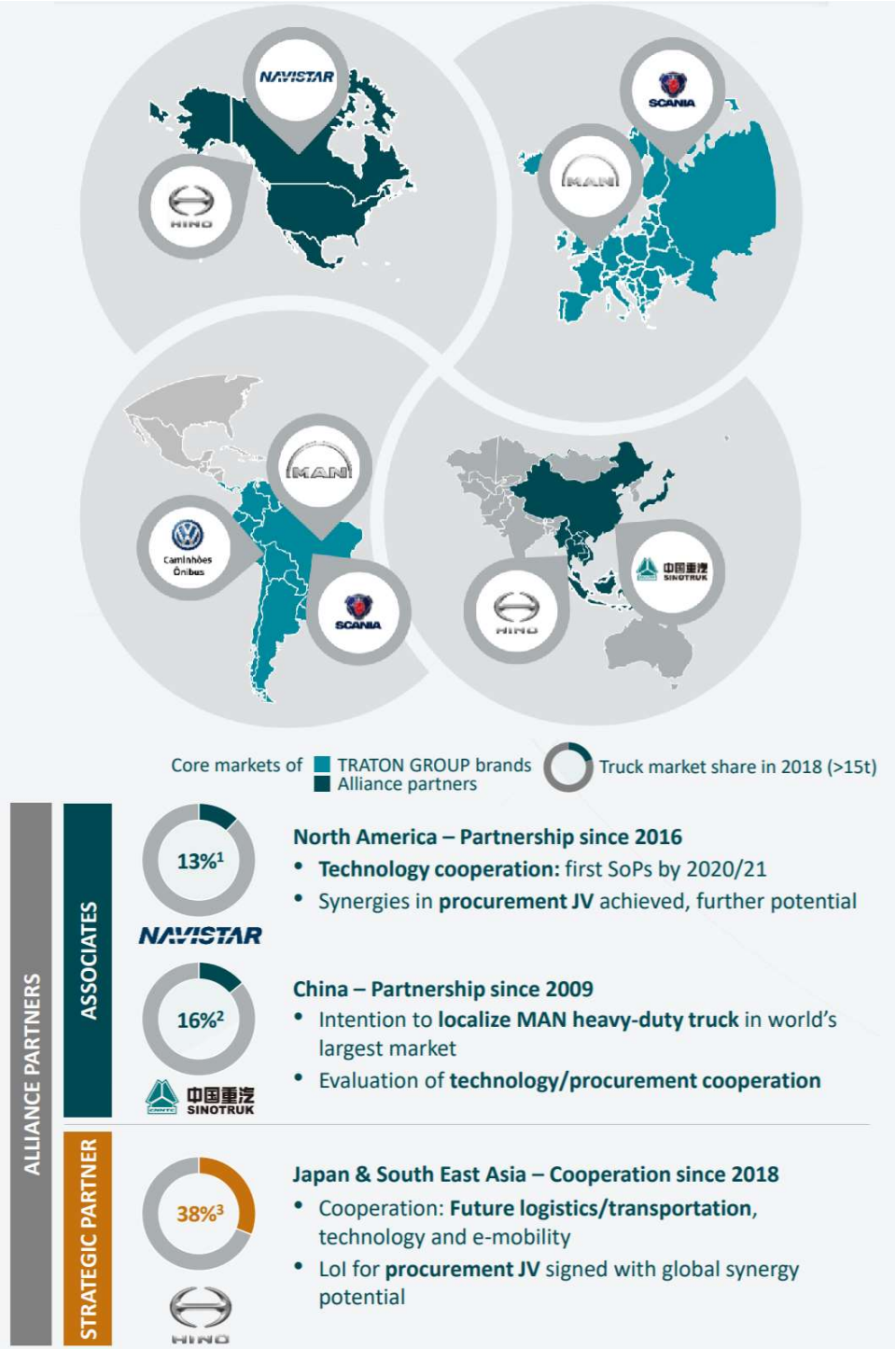
Source: Traton SE

Exhibit 30: Traton's Vehicle Unit Sales by Brand during Fiscal Year 2018



Source: Bloomberg

Exhibit 31:Traton's Global Expansion as of June 2019



Note: SoP = Start of Production; LoI = Letter of Intent; JV = Joint Venture

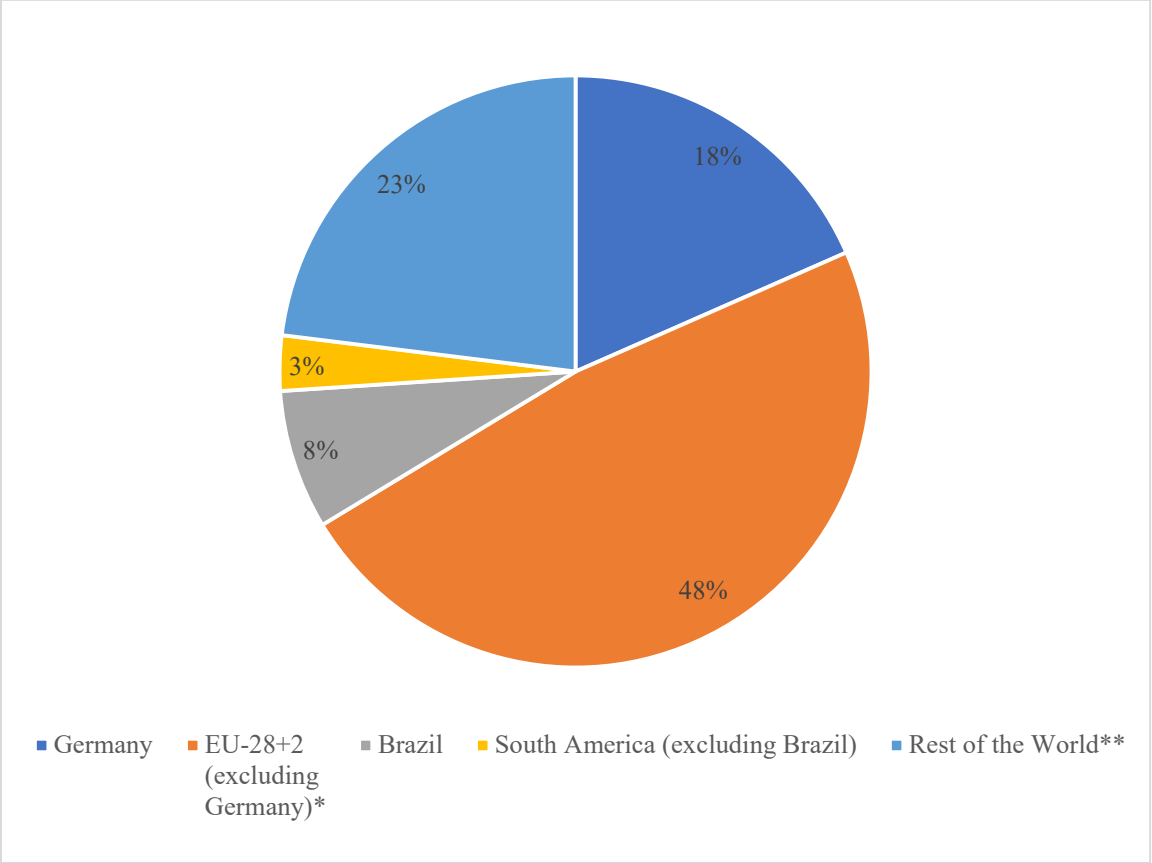
[1]Market share of Navistar Canada and USA.

[2] Market share of CNHTC (parent company of Sinotruk) in China (including Hong Kong).

[3] Market share of Hino in Japan and South East Asia (Indonesia, Australia, Malaysia, New Zealand, Philippines, Singapore, South Korea, Taiwan, Thailand, Vietnam).

Source: Traton SE

Exhibit 32: Traton's Sales Revenue by Region in Fiscal Year 2018

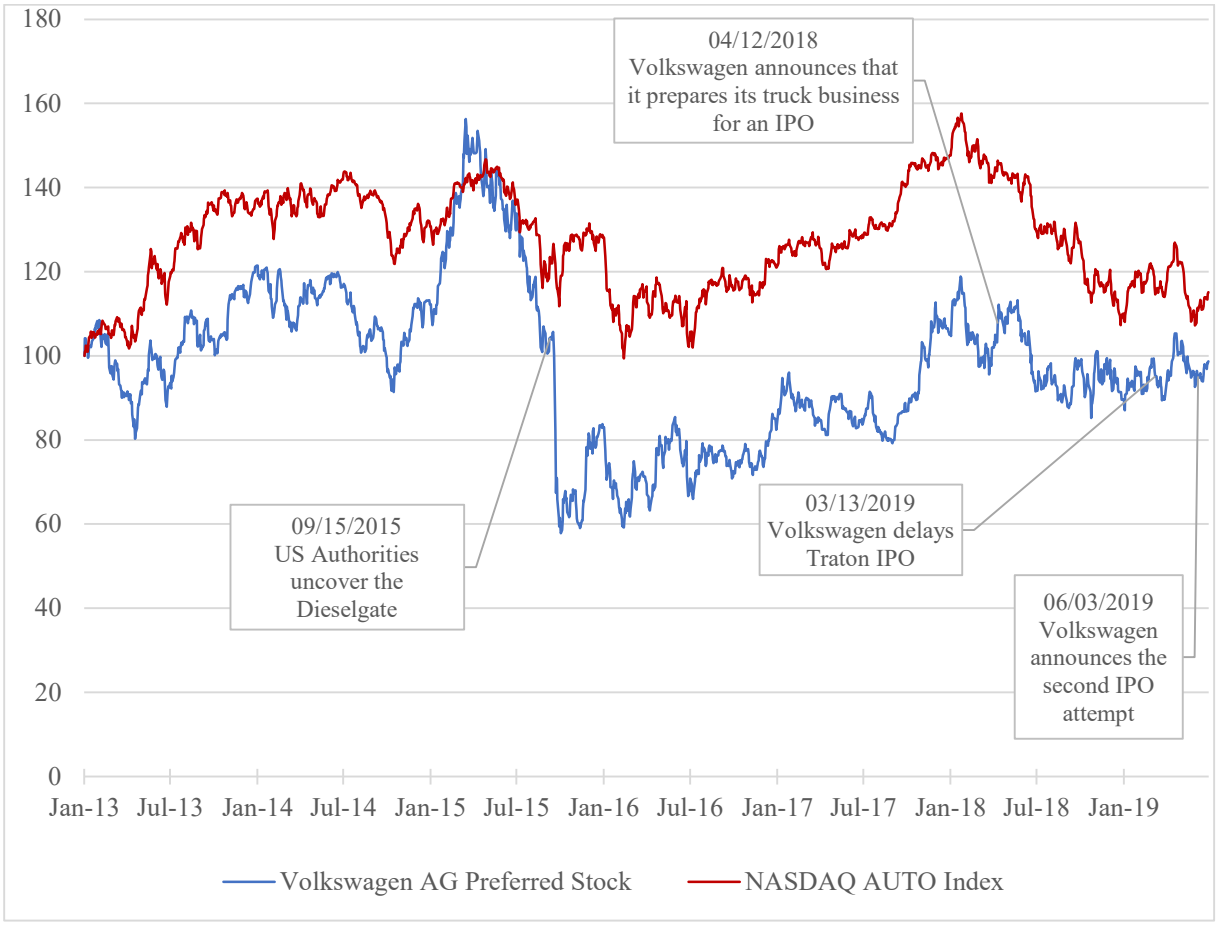


*EU28+2 region consists of EU member states plus Norway and Switzerland.

**Including sales revenue from hedging transactions not assigned to regions.

Source: Traton SE

Exhibit 33: Performance of the Volkswagen AG Preferred Stock and the NASDAQ Global Auto Index from January 2012 to June 2019 Including Key Events



The performance of the respective securities is presented as an index with a start value of 100. The NASDAQ Global Auto Index is a market capitalization weighted index of global automotive manufacturing corporations. The stock and index performance is adjusted for dividends and stock splits.

Source: Bloomberg, Volkswagen AG

Exhibit 34: Arndt Ellinghorst's Sum of the Parts (SOTP) Analysis of Volkswagen

SOTP Valuation (Normalised)	Sales with 3rd parties	EV/Sales	EV (I)	EBITDA	EV/EBITDA	EV (II)	EBIT	EV/EBIT	EV (III)	EV (Average)	EBIT margin
Porsche	26,000	1.70x	44,200	5,981	7.00x	41,867	3,900	10.00x	39,000	41,689	15.0%
Volkswagen	90,000	0.35x	31,500	9,602	3.00x	28,805	4,500	6.00x	27,000	29,102	5.0%
Audi	65,000	0.40x	26,000	8,714	3.00x	26,143	5,850	4.50x	26,325	26,156	9.0%
Seat	12,000	0.10x	1,200	669	1.00x	669	240	3.00x	720	863	2.0%
Skoda	19,000	0.45x	8,550	1,992	3.00x	5,975	1,330	5.00x	6,650	7,058	7.0%
Light Commercial Vehicles	13,000	0.45x	5,850	1,187	5.00x	5,935	650	7.00x	4,550	5,445	5.0%
Scania	15,000	1.20x	18,000	1,860	8.00x	14,880	1,500	12.00x	18,000	16,960	10.0%
MAN	18,000	0.80x	14,400	1,610	7.00x	11,270	1,080	8.00x	8,640	11,437	6.0%
Bugatti/Bentley	2,000	1.50x	3,000	298	8.00x	2,385	200	10.00x	2,000	2,462	10.0%
MEB (Electric Platform; 2025 discounted)	85,000	0.50x	42,500							42,500	
Other / consolidation							-2,000	3.50x	-7,000	-7,000	
SOTP Industrial Business										**176,671**	
Financial Services			book value							31,358	
China JVs (30% discount on DDM; Eur21.9bn of dividends 2008-17; 50% in SAIC and 40% in FAW)			2019E at-equity contribution:			€ 3,169				**23,586**	
SOTP Operating Business										**231,616**	
Net debt industrial business (- net debt / + net cash)			€25bn reported end of 2018							32,992	
Pension provisions Industrial Business			on balance; not cash funded							-33,798	
Future cash out for Diesel										-5,900	
Minority interest										339	
Market Value Group										**225,249**	
Number of shares										501	
Fair Value per share										449	
Current share price (prefs)										152	
Discount of preference shares/conglomerate										-66%	
Evercore ISI target price										**220**	

Source: Evercore ISI Research

Exhibit 35: Commercial Vehicle Industry: Comparable Companies

	AB Volvo	CNH Industrials	Daimler	General Dynamics	Hino Motors	Navistar	Paccar
Currency	SEK	USD	EUR	USD	JPY	USD	USD
Exchange Rate as of June 3, 2019 (EUR/X)	10.62	1.12	1.00	1.12	121.49	1.12	1.12
In Million (Except JPY in Billion and %)							
Market Capitalization	285,034.78	11,850.11	49,720.70	47,129.47	495.29	3,080.94	22,944.94
Enterprise Value*	400,117.78	13,928.11	37,097.70	61,698.47	750.29	5,097.69	19,130.24
Revenue	390,834.00	29,706.00	167,362.00	36,193.00	1,981.33	10,250.00	23,495.70
Revenue Growth in %	17.46	7.24	1.95	16.85	7.80	19.60	20.76
Depreciation and Amortization	18,439.00	1,337.00	6,305.00	763.00	58.54	211.00	1,054.10
Interest Expense	1,658.00	812.00	793.00	374.00	5.89	327.00	166.50
Pretax Income	32,148.00	1,466.00	10,595.00	4,085.00	82.52	420.00	2,810.20
Net Income	24,897.00	1,068.00	7,249.00	3,345.00	54.91	340.00	2,195.10

*Enterprise Value is adjusted for net debt of financial service subsidiaries

AB Volvo is one of the world's largest commercial vehicle manufacturers. The Swedish truck company's portfolio consists of trucks, buses, construction equipment, marine and industrial engines. It sells its products under ten different brands, including Volvo, UD Trucks, Prevost, Mack, and Renault Trucks. The company generates a majority of its sales in Europe and should not be confused with Volvo Cars, a passenger car brand that it sold in 1999 and which now belongs to the Chinese automotive company Geely.

CNH Industrials is well known in Europe for its truck and bus brand Iveco, but it is also one of the world's largest manufacturers of agricultural vehicles. The UK-headquartered company produces vehicles for almost every commercial application field, including construction vehicles and firefighting trucks. Powertrains and engines also belong to CNH Industrial's product portfolio.

Daimler is the world's largest truck manufacturer of trucks and buses. While the commercial vehicle business accounts for about a third of Daimler's total revenue, more than half is generated by the premium passenger car brand Mercedes-Benz.

General Dynamics manufactures all sorts of military and defense vehicles. The US company's portfolio ranges from tanks and (nuclear) submarines to military jets. It is one of the largest defense contractors in the world.

Hino Motors, Japan's oldest truck manufacturer, is dominating its home market's commercial vehicle sector. While the company's operations are mainly focused on the Asian markets, it also manufactures and sells its trucks and buses in North and South America.

Navistar is a US-based manufacturer of buses, heavy-duty trucks, military vehicles, and diesel engines, which it mainly sells in North America. Its parts distribution network is one of the largest in the US.

Paccar focuses on manufacturing medium and heavy-duty trucks primarily in its home market, the United States, where the company generates about half of its revenue.

Source: Bloomberg

Exhibit 36: Passenger Car Industry: Comparable Companies

Fiscal Year Ended	BMW	Ferrari	Fiat Chrysler	Ford	General Motors	Renault	Tesla	Toyota
Currency	EUR	EUR	EUR	USD	USD	EUR	USD	JPY
Exchange Rate on June 3, 2019 (EUR/X)	1.00	1.00	1.00	1.12	1.12	1.00	1.12	121.49
In Million (Except JPY in Billion and %)								
Market Capitalization	39,835.71	23,786.64	19,878.92	38,339.54	47,799.84	16,042.93	31,877.29	20,697.19
Enterprise Value*	66,753.09	24,796.18	19,738.71	27,969.54	50,936.84	14,281.93	43,814.34	36,236.21
Revenue	96,855.00	3,420.32	110,412.00	160,338.00	147,049.00	57,419.00	21,461.27	30,225.68
Revenue Growth in %	-1.45	0.10	4.43	2.27	1.00	-2.30	82.51	2.88
Depreciation & Amortization	8,601.00	288.75	5,507.00	8,413.00	13,669.00	3,245.00	1,901.05	1,792.38
Interest Expense	324.00	22.53	681.00	1,228.00	655.00	373.00	663.07	28.08
Pretax Income	9,627.00	802.94	4,108.00	4,345.00	8,549.00	4,174.00	-1,004.75	2,285.47
Net Income	6,974.00	784.68	3,608.00	3,677.00	8,014.00	3,302.00	-976.09	1,882.87

*Enterprise Value is adjusted for net debt of financial service subsidiaries

BMW is one of the world's largest premium passenger car manufacturers. With its brands, BMW, Mini, and Rolls-Royce, the German automotive company sold 2.5m cars and motorcycles in 2018. European and Asian markets account for large junks of its sales.

Ferrari is a well-known Italian luxury sports car brand and sold only a little more than nine thousand vehicles in 2018. However, Ferrari's cars' price tags start at around 300 thousand EUR, making the company very profitable.

Fiat Chrysler sells its passenger cars globally under several different brands, including Alfa Romeo, Chrysler, Fiat, Dodge, Jeep, and Maserati. However, it generates the majority of its sales in North America. The broad brand portfolio resulted from the merger of US-American automotive company Chrysler and its Italian competitor Fiat.

Ford Motor Company is deeply rooted in the United States, where it generates most of its sales through its passenger car brands Ford and Lincoln.

General Motors became one of the world's largest automotive companies by dominating the US market, where it generated about 80% of its sales in 2018. The company sells its passenger cars under the brands Buick, Cadillac, Chevrolet, and GMC.

Renault is a French automotive company that sells passenger cars under brands such as Renault, Dacia, and Lada. In 2001 it parted from its truck business by selling it to AB Volvo.

Tesla disrupted the passenger car industry by producing electric sports cars that have unique digital and autonomous driving features built in. Despite its lofty valuation, the company's structures were still quite start-up-like in many regards, and it continued to be loss-making during the fiscal year of 2018.

Toyota, after Volkswagen the world's second-largest automaker, sold 9m vehicles in the fiscal year ending March 2019. The Japanese company has an extensive product portfolio that caters to several different customer segments. It is world-leading in hybrid-electric propulsion technology, which it uses in its popular Toyota Prius car.

Source: Bloomberg

Exhibit 37: Volkswagen exclusive of Traton pro forma Income Statement

In Millions of EUR	Fiscal Year ended December 31, 2016	2017	2018
Revenue	**195,352**	**205,184**	**209,922**
/ Cost of Revenue	(158,621)	(166,348)	(168,554)
Gross Profit	**36,731**	**38,836**	**41,368**
Other Operating Income	8,805	9,510	9,695
/ Operating Expenses	(39,160)	(36,040)	(38,656)
Operating Income (Loss)	**6,376**	**12,306**	**12,407**
Interest Income	563	860	884
Income from Affiliates	3,480	3,408	3,160
/ Interest Expense	(1,032)	(2,053)	(1,302)
/ Other Financial Result	(2,588)	(2,227)	(1,072)
Pretax Income	**6,799**	**12,294**	**14,077**
/ Income Tax Expense (Benefit)	(1,616)	(1,721)	(3,075)
Current Income Tax	(2,850)	(2,828)	(3,084)
Deferred Income Tax	1,234	1,107	9
Income (Loss) from Continued Operations	**5,183**	**10,573**	**11,002**
Income from Discontinued Operations	(22)	(149)	(250)
Income (Loss) Incl. Minority Interest	**5,161**	**10,424**	**10,752**
/ Minority Interest	0	0	(6)
Net Income	**5,161**	**10,424**	**10,746**
/ Attributable to Volkswagen AG Hybrid Capital Investors	(225)	(274)	(309)
Net Income Attributable to Volkswagen AG Shareholders	**4,936**	**10,150**	**10,437**

Source: Bloomberg

Exhibit 38: Volkswagen exclusive of Traton Depreciation and Amortization

In Millions of EUR	Fiscal Year ended December 31, 2016	2017	2018
Depreciation & Amortization	18,927	22,030	20,498

Source: Bloomberg

Exhibit 39: Volkswagen exclusive of Traton pro forma Balance Sheet

In Millions of EUR	As of December 31,			As of March 31,
	2016	2017	2018	2019
Assets				
Noncurrent assets	**229,666**	**236,744**	**248,769**	**257,579**
Intangible assets	55,544	56,400	58,016	58,188
Property, plant and equipment	48,093	49,240	52,161	55,774
Lease assets	32,599	33,151	36,946	38,608
Financial services receivables	65,165	69,444	74,480	77,236
Investments, equity-accounted investments and other equity investments, other receivables and financial assets	28,266	28,509	27,165	27,775
Current assets	**138,806**	**142,684**	**163,003**	**170,301**
Inventories	33,573	34,634	40,923	43,977
Financial services receivables	47,561	50,826	51,528	53,346
Other receivables and financial assets	25,877	27,357	27,788	37,654
Marketable securities	17,436	15,888	16,982	15,922
Cash, cash equivalents	14,358	13,863	25,941	19,402
Assets held for sale	–	115	(157)	–
Total assets	**368,472**	**379,428**	**411,772**	**427,881**
Equity and liabilities				
Equity	**81,979**	**97,267**	**100,541**	**104,194**
Noncurrent liabilities	**128,219**	**139,488**	**159,629**	**172,624**
Noncurrent Financial liabilities	62,803	76,083	95,677	103,207
Provisions for pensions	31,486	31,189	31,591	35,522
Other liabilities	33,928	32,217	32,364	33,896
Current liabilities	**158,274**	**142,672**	**151,602**	**151,062**
Put options and compensation rights granted to noncontrolling interest shareholders	–	–	26	–
Current Financial liabilities	82,976	78,418	84,391	77,901
Trade payables	19,432	19,539	20,638	21,478
Other liabilities	55,865	44,716	46,544	51,684
Total equity and liabilities	**368,472**	**379,428**	**411,772**	**427,881**

Source: Volkswagen AG and Traton SE

Exhibit 40: Volkswagen (exclusive of Traton)'s Industrial Business Net Financial Debt

In Millions of EUR	As of December 31, 2018	As of March 31, 2019	Change
Cash, cash equivalents	25,941	19,402	(6,539)
Marketable securities	16,878	15,922	15,720
Gross liquidity	42,818	35,324	(7,494)
Total borrowings	(180,069)	(181,108)	(1,039)
Net liquidity / (net financial debt)	**(137,250)**	**(145,784)**	(8,534)
of which in the Industrial Business segment	**24,635**	**16,472**	(8,163)

Source: Volkswagen AG and Traton SE

Exhibit 41:Traton's Supervisory Board Composition as of June 14, 2019

Member; Gender	**Background**	**Representative of**
Shareholder Representatives		
Hans Dieter Pötsch; m **Chairperson**	Chairperson of VW's and Porsche Automobil Holding SE's Supervisory Board	VW AG / Porsche Automobil Holding SE
Dr. Manfred Döss; m	Member of the Management Board of Porsche Automobil Holding SE; General Counsel of Volkswagen AG	Porsche Automobil Holding SE
Gunnar Kilian; m	Member of the Management Board of VW AG	VW AG
Dr. Albert Xaver Kirchmann; m	Self-Employed Chief Executive Advisor	Others
Dr Julia Kuhn-Piëch; f	Real Estate Manager	Porsche Automobil Holding SE
Nina Macpherson; f	Member of the Board of Directors of Scania AB	Others
Dr. Dr. Christian Porsche; m	Specialist for neurology	Porsche Automobil Holding SE
Dr .Wolf-Michael Schmid; m	Entrepreneur	State of Lower Saxony
Hiltrud Dorothea Werner; f	Member of the Management Board of VW AG	VW AG
Frank Witter; m	Member of the Management Board of VW AG	VW AG
Employee Representatives		
Athanasios Stimoniaris; m **Deputy Chairperson**	Chairperson of the Group Works Council of MAN SE and of the SE Works Council	Works Council
Torsten Bechstädt; m	Expert consultant of the Group Works Council	
Mari Carlquist; f	Representative of the Federation of Salaried Employees in Industry and Services at Scania	
Jürgen Kerner; m	Executive Member of the Executive Board of IG Metall (German Union)	
Lisa Lorentzon; f	Chairperson of the Union for University Graduates at Scania AB	
Bo Luthin; m	Senior safety officer at Scania Södertälje; Coordinator for IF Metall (Swedish Union)	
Michael Lyngsie; m	Chairperson of IF Metall at Scania (Swedish Union)	
Bernd Osterloh; m	Chairperson of the Group Works Council of Volkswagen AG	
Karina Schnur; f	Secretary of the Works Council of IG Metall (German Union)	
Steffen Zieger; m	Chairman of the General Works Council of MAN Truck & Bus Deutschland GmbH	

Source: Traton SE

Exhibit 42: Management Board Composition of Traton as of June 14, 2019

Name; Gender	Responsibilities	Background
Andreas Renschler; m	Chairperson	Renschler completed an apprenticeship as a banker and holds degrees in business engineering and business administration. He began his career at Daimler in 1988 and worked in multiple leadership positions. He spent nine years on the management board of Daimler's truck division. Since 2015 he is a member of Volkswagen's management board and Traton CEO.
Antonio Roberto Cortes; m	MAN Latin America (VWCO)	Cortes, born in Brazil, was working in the automotive industry since 1979. He started to work for a South American Ford and Volkswagen joint-venture in 1986. In 1994 he became Volkswagen's corporate controller for South America. In 1998 he began to work in Volkswagen's commercial vehicle unit and became president of MAN Latin America (VWCO) in 2009.
Joachim Gerhard Drees; m	MAN	Drees holds an MBA from Portland State University, Oregon, USA. He worked as a consultant before joining Daimler in 1996. His positions there included head of corporate strategy for commercial and head of commercial vehicles controlling. In 2006 he joined a British investment company and in 2015, he joined Volkswagen as CEO of MAN.
Henrik Henriksson; m	Scania	Henriksson, born in Sweden, holds an MBA from Stern School of Business, New York, USA, and Edinburgh University, UK. He joined Scania AB in 1997 as a management trainee. In 2016, he was appointed as CEO of the company.
Dr. Carsten Intra; m	Human Resources and IT	Intra earned a doctorate in mechanical engineering at RWTH Aachen. He started his career as a production engineer at MAN in 2001. He is a member of MAN's management board since 2012.
Christian Levin; m	Procurement, Development, and Strategic Product Planning	Levin, born in Sweden, holds a Master of Science degree in mechanical engineering. He started his career as a marketing trainee at Scania in 1994. He was appointed as Scania's executive vice president of sales & marketing in 2016.
Christian Schulz; m	Finance and Strategy	Schulz started his career at Daimler in 1999. He held various positions in the finance, controlling and risk management department of Daimler trucks. Between 2008 and 2011, he worked as a controlling director for purchasing, production, and development at Japanese Mitsubishi Fuso Truck & Bus. Before joining Traton's management board in 2017, he worked in Daimler's passenger car division.

Source: Traton SE

Exhibit 43: Andreas Renschler's (Traton CEO) Remuneration as Described in Traton's IPO Prospectus

Non-performance-based Salary

"For Mr. Renschler, the annual base compensation under his service agreement with Volkswagen AG amounts to EUR 1,350,000 (gross). The annual base compensation is reviewed at regular intervals by (…) the supervisory board of Volkswagen AG."

Performance-based Variable Remuneration Components

"The variable remuneration consists of the following variable components. For Mr. Renschler, the supervisory board of Volkswagen AG may cap the performance-based variable remuneration components in the event of extraordinary developments. Furthermore, the supervisory board of Volkswagen AG has the right to grant Mr. Renschler a reasonable additional bonus payment in the event of outstanding, exceptional performance of Mr. Renschler, if such bonus payment is (pursuant to the discretion of the supervisory board of Volkswagen AG) in the interest of Volkswagen AG and provided there is a future-related benefit for Volkswagen AG from granting such bonus payment. The overall maximum compensation amount for Mr. Renschler is applicable on such additional bonus payments and the overall-payments to Mr. Renschler have to be in an appropriate proportion to the position of Volkswagen AG."

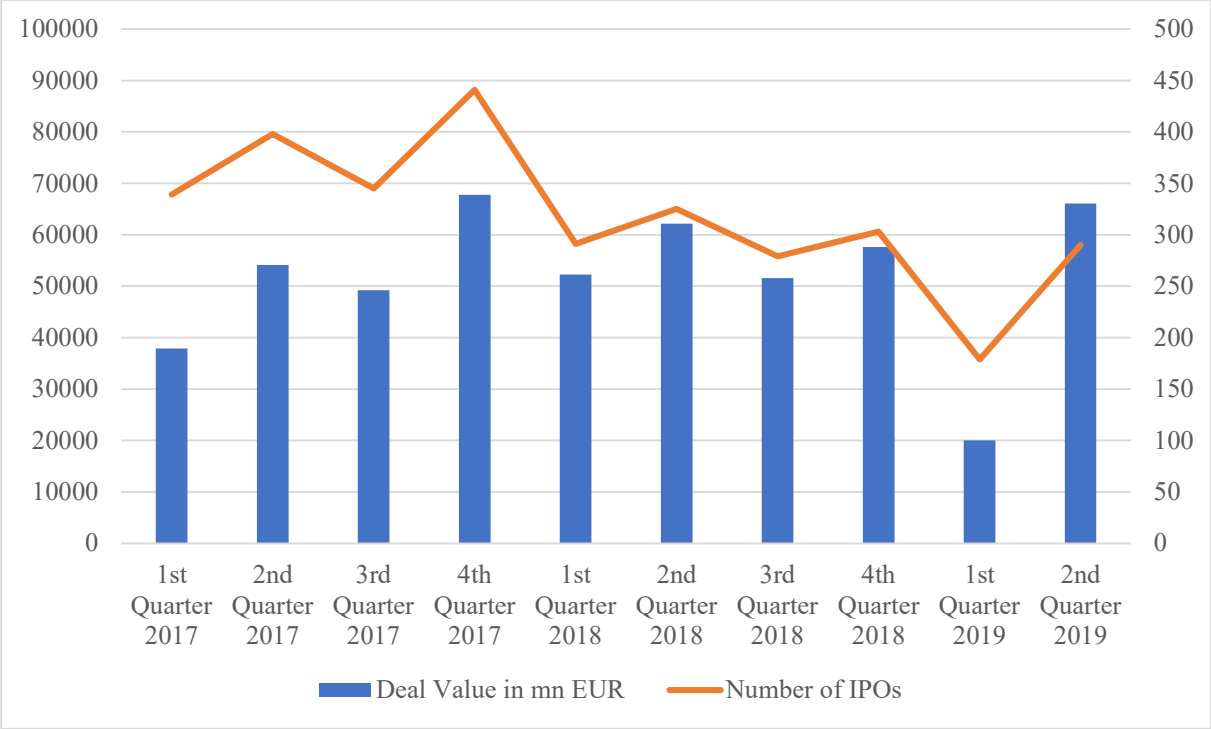
Profit Bonus: "The Profit Bonus of Mr. Renschler is governed by his service agreement with Volkswagen AG and the remuneration terms and conditions for board members of Volkswagen AG. The target amount in case of 100% target achievement amounts to EUR 1,350,000 (gross) p.a. and is based upon the result for the respective fiscal year of Volkswagen AG. Operating profit achieved by the Volkswagen Group plus the proportionate operating profit of the Chinese joint ventures form half of the basis for the Profit Bonus, with operating return on sales achieved by the Volkswagen Group making up the second half. Each of the two components of the Profit Bonus will only be payable if certain thresholds are reached or exceeded. The calculated payment amount for the Profit Bonus of Mr. Renschler may be individually reduced (multiplier of 0.8) or increased (multiplier of 1.2) by up to 20% by the supervisory board of Volkswagen AG, taking into account the degree of achievement of individual targets agreed between the supervisory board of Volkswagen AG and Mr. Renschler, as well as the success of the full management board of Volkswagen AG in transforming the Volkswagen Group by transferring employees to new areas of activity."

Long-term Incentive (LTI): "Mr. Renschler participates in the LTI program for members of the management board of Volkswagen AG ("LTI-VW") which is in general comparable to the LTI of the Company. An LTI-VW award is granted to Mr. Renschler annually which is subject to a performance share plan of Volkswagen ("Performance Share Plan-VW"). The annual target amount from the Performance Share Plan-VW for Mr. Renschler is currently EUR 1,800,000 (gross) and stipulated by the supervisory board of Volkswagen AG.

Each Performance Period of the Performance Share Plan-VW has a term of three years. At the time the LTI-VW is granted, the annual target amount under the LTI-VW is converted on the basis of the initial reference price of Volkswagen's preferred shares into Performance Shares of Volkswagen AG, which are allocated to Mr. Renschler purely for calculation purposes. The conversion is performed based on the unweighted average of the closing prices of Volkswagen's preferred shares for the last 30 trading days preceding January 1 of a given fiscal year. At the end of each year, the number of Performance Shares is determined definitively for one-third of the three-year Performance Period based on the degree of target achievement for the annual earnings per Volkswagen preferred share (EPS – earnings per share per preferred share in EUR). A prerequisite for this is that a threshold is reached which is set by the supervisory board of Volkswagen AG. A cash settlement is made at the end of the three-year term of each Performance Share Plan-VW. The payment amount corresponds to the final number of determined Performance Shares, multiplied by the closing reference price at the end of the three-year period plus a dividend equivalent for the relevant term. The closing reference price is the unweighted average of the closing prices for Volkswagen's preferred shares for the 30 trading days preceding the last day of the three-year performance period. The payment amount under the Performance Share Plan-VW is limited to 200% of the target amount."

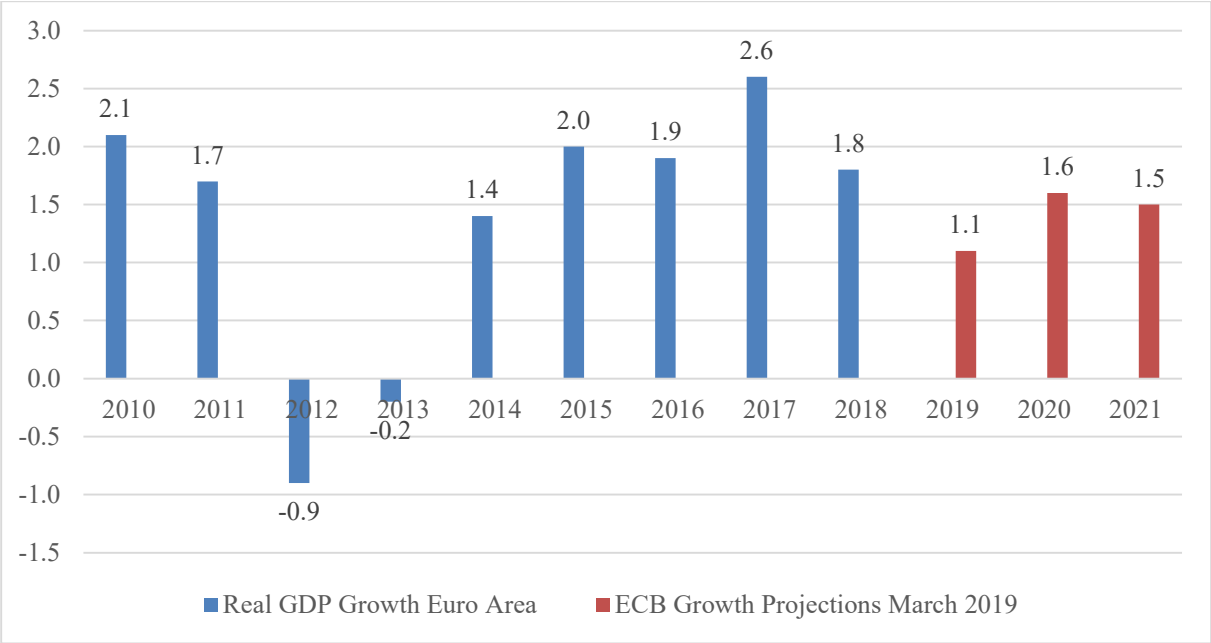
Source: Traton SE

Exhibit 44: Performance of the global IPO market from 2017 to 2019



Source: PWC

Exhibit 45: Real GDP Growth and Forecasted GDP Growth in the Euro Area in %



Source: ECB and IMF

Exhibit 46: Investment Banks Involved in Traton's IPO

Joint Global Coordinators				
Citigroup	**Deutsche Bank**	**Goldman Sachs International**		**J.P. Morgan**
Joint Bookrunners				
BofA Merrill Lynch	**Barclays**	**BNP PARIBAS**	**SEB**	**UniCredit Bank AG**
Co-Lead Managers				
COMMERZBANK	**HSBC**	**Société Générale**		**Landesbank Baden-Württemberg**

Source: Traton SE